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SUPERIOR COURT OF THE STATE OF WASHINGTON  
IN AND FOR KING COUNTY

ANGELA B. HEIT; NICOLAS L. HEIT; SANDRA K.  
JOHNSON; CATHERINE A. KARLSEN; POLLY A.  
MULLER; LAURA F. NAVONE; ROBIN C.  
OESTREICH; DANIEL S. PIERCE; JENNIFER M.  
TOUTONGHI; and DOES 1-178;

No.

**COMPLAINT FOR DAMAGES**

Plaintiffs,

v.

MONSANTO COMPANY, a Delaware corporation;  
SOLUTIA, INC., a Delaware corporation; PHARMACIA  
LLC, a Delaware limited liability corporation, f/k/a  
Pharmacia Corporation; UNION HIGH SCHOOL  
DISTRICT NO. 402; SNOHOMISH HEALTH  
DISTRICT; and ROES 1-10;

Defendants.

**NB:** This is the sixth complaint in the *Sky Valley* litigation. The first complaint (44 Plaintiffs) is *Bard et al. v. Monsanto Co. et al.*, King Co. Sup. Ct. Case No. 18-2-00001-7 SEA. The second complaint (5 Plaintiffs) is *Erickson et al. v. Monsanto Co. et al.*, King Co. Sup. Ct. Case No. 18-2-11915-4. The third complaint (11 Plaintiffs) is *Soley et al. v. Monsanto Co. et al.*, King Co. Sup. Ct. Case No. 18-2-23255-4 SEA. The fourth complaint (13 Plaintiffs) is *Allison et al. v. Monsanto Co. et al.*, King Co. Sup. Ct. Case No. 18-2-26074-4 SEA. The fifth complaint (14 Plaintiffs) is *Caldwell-Eleazer et al. v. Monsanto Co. et al.*, King Co. Sup. Ct. Case No. 18-2-54572-2 SEA. The exhibits referenced in this complaint may be found in the *Bard* case file and are also available upon request.

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1     **I. INTRODUCTION TO THE SKY VALLEY EDUCATION CENTER CASE**

2       1.1 Monsanto intentionally produced and promoted in the U.S. more than 1.25  
 3 billion pounds of synthetic chemicals called Polychlorinated Biphenyls (PCBs). According  
 4 to U.S. government agencies, PCBs are “extremely toxic” and damage essentially every  
 5 system of the human body. Since the 1930s, Monsanto has known that PCBs are toxic, yet  
 6 promoted them without adequate warnings for electrical, construction, and other  
 7 applications—until they were banned. Internal memoranda, however, show that while  
 8 Monsanto knew PCBs are toxic, Monsanto made decisions based on PCB profits. As a  
 9 consequence, PCBs were produced and incorporated into public buildings, including  
 10 school buildings. Today up to 14 million school children—and their teachers—in U.S.  
 11 schools may be exposed to PCBs, as estimated by a Harvard School of Public Health study.  
 12 Monsanto still fails to adequately warn about the extreme toxicity of PCBs.

13       1.2 In this case, the contaminated school is called old Monroe Middle School /  
 14 Sky Valley Education Center. The school contained PCBs and other toxic chemicals,  
 15 exposing the children and adults who used the buildings. As a result, these individuals  
 16 have been coping with adverse medical effects, including neurological damage,  
 17 autoimmune and endocrine diseases, and cancers. The School District building owner and  
 18 the Health District negligently allowed the toxic chemicals to exist in the school, due in  
 19 part to Monsanto’s ongoing failure to warn about PCBs’ extreme toxicity. Regardless, the  
 20 public entities had duties of reasonable care to provide, maintain, inspect, and enforce  
 21 environmental safety at the school for the children and adults at Sky Valley. The public  
 22 entities violated their duties by allowing the toxic chemicals to remain in the school and  
 23 poison children and adults, including the teachers.

24       1.3 This case is about school safety and the toxic chemicals in schools that  
 25 poisoned children and adults, and whether under state law the manufacturer will be held  
 26 accountable for its toxic products, and whether the public entities that are obligated to  
 27 provide safe schools will be held accountable for the toxic school.

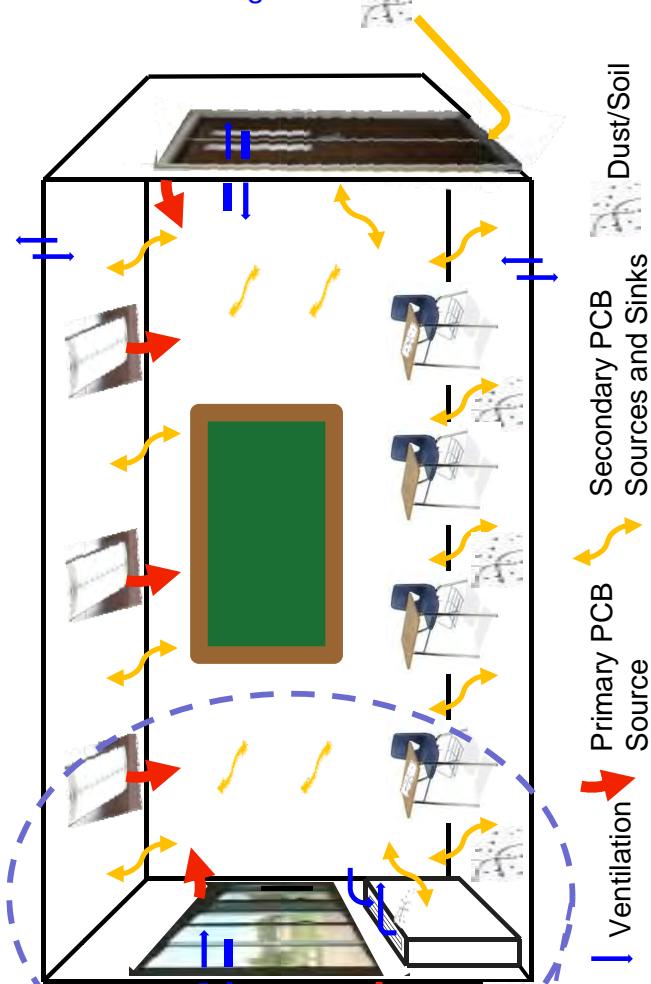
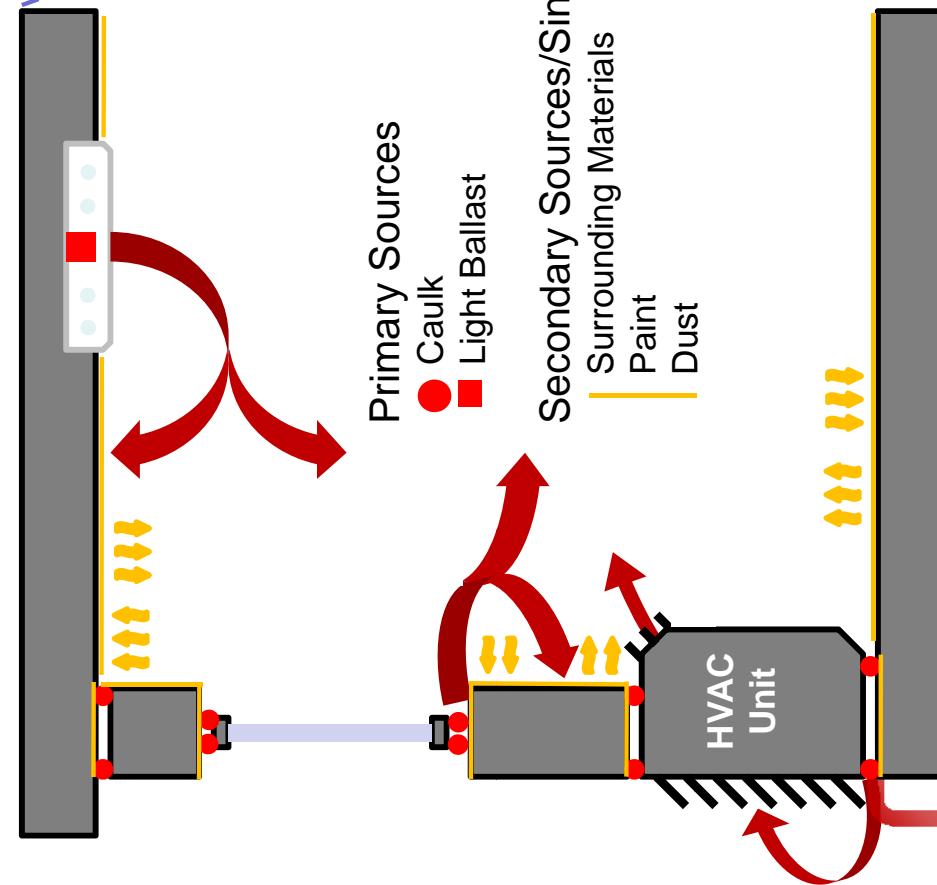
28       1.4 The following EPA slide demonstrates the mechanism of the toxic poisoning:



# PCBs - A Complex Problem in Buildings

## Example Scenario

- Over 100 PCB chemicals
- Multiple primary sources possible
- Transport from sources to air, surfaces, dust, soil
- Secondary sources created
- Exposures through multiple pathways
- Ventilation and temperature effects



1           **II. IDENTITY OF THE PARTIES**

2           **A. Identities of the Defendants.**

3           2.1 In 2015 and 2016, the Cities of Spokane and Seattle and the State of  
 4 Washington each separately sued the Monsanto Defendants for their role in  
 5 contaminating Washington public resources with Monsanto's PCBs. Many of the  
 6 following allegations have been made or admitted to by the State and Monsanto  
 7 Company, Solutia, Inc., and Pharmacia LCC, through the State's Complaint for  
 8 Damages, and Monsanto, et al.'s Answer to the Complaint, or are sourced from other  
 9 public documents. *See* State's Complaint for Damages, *State v. Monsanto, et al.*, King  
 10 County Case No. 16-2-29591-6-SEA (December 16, 2016), and Defendant Monsanto  
 11 Company et al.'s Answer to Complaint, *State v. Monsanto Company, et al.*, No. 2:17-cv-  
 12 00053 (W.D. Wash. Jan. 12, 2017); *see also City of Seattle v. Monsanto Co.*, 237 F.  
 13 Supp. 3d 1096, 1100, fn 2 (W.D. Wash. 2017) ("The original Monsanto Company  
 14 operated within three main industries: agricultural products, chemical products, and  
 15 pharmaceuticals. In the late 1990s, Monsanto Company spun off into three separate  
 16 corporations, each responsible for a different industry: Monsanto Company retained the  
 17 agricultural products business; Solutia, Inc. assumed the chemical products business; and  
 18 Pharmacia Corporation assumed the pharmaceutical business. Each assumed certain  
 19 assets and liabilities from the original Monsanto Company, and all are defendants in this  
 20 case"); *City of Spokane v. Monsanto Co.*, Case No. 2:15-cv-00201-SMJ (E.D. Wash. July  
 21 31, 2015); *see also Solutia, Inc. v. McWane, Inc.*, 726 F.Supp.2d 1316, 1318-19 (N.D.  
 22 Ala. 2010) ("Monsanto Company and its predecessors produced polychlorinated  
 23 biphenyls ('PCBs')... In 1997, Monsanto created Solutia in a spin-off transaction... In  
 24 2000, Pharmacia was formed by the merger of Monsanto and Pharmacia & Upjohn").

25           2.2 Defendant Monsanto Company is a Delaware corporation with its principal  
 26 place of business in St. Louis County, Missouri.

27           2.3 Defendant Solutia, Inc. is a Delaware corporation with its principal place of  
 28 business in St. Louis County, Missouri.

1       2.4   Defendant Pharmacia LLC is formerly known as Pharmacia Corporation  
 2 and is successor to the original Monsanto Company. Pharmacia is a Delaware limited  
 3 liability corporation and is a citizen of the states of New York and Delaware. Pharmacia  
 4 is now a wholly-owned subsidiary of Pfizer, Inc.

5       2.5   The original Monsanto Company (“Old Monsanto”) operated agricultural,  
 6 chemical, and pharmaceutical businesses.

7       2.6   Old Monsanto began manufacturing PCBs around the 1930s and continued  
 8 to manufacture commercial PCBs, including PCBs used in electrical equipment  
 9 applications such as light ballasts, through the 1940s, 1950s, 1960s, and 1970s, until  
 10 approximately 1977.

11      2.7   Around 1997, Old Monsanto spun-off its chemical business to Solutia.  
 12 Since 2000, the present or current Monsanto Company has operated the agricultural  
 13 business, while Pharmacia retained the pharmaceutical business.

14      2.8   Old Monsanto is now known as Pharmacia LLC.

15      2.9   Old Monsanto organized Solutia to own and operate its chemical  
 16 manufacturing business. Solutia assumed the operations, assets, and liabilities of Old  
 17 Monsanto’s chemical business.

18      2.10   Although Solutia assumed and agreed to indemnify Pharmacia (then known  
 19 as Monsanto Company) for certain liabilities related to the chemicals business,  
 20 Monsanto, Solutia, and Pharmacia have also entered into agreements to share or  
 21 apportion liabilities, and/or to indemnify one or more entities, for claims arising from  
 22 Old Monsanto’s chemical business, including the manufacture and sale of PCBs.

23      2.11   According to Monsanto, Solutia, and Pharmacia, the three entities have  
 24 entered into complex corporate transactions and agreements that determine their  
 25 respective legal or financial obligations for claims arising from Old Monsanto’s  
 26 manufacture and sale of PCBs.

27      2.12   In 2003, Solutia filed a voluntary petition for reorganization under Chapter  
 28 11 of the U.S. Bankruptcy Code. Solutia’s reorganization was completed in 2008. In

1 connection with Solutia's Plan of Reorganization, Solutia, Pharmacia, and new  
 2 Monsanto entered into several agreements under which Monsanto continues to manage  
 3 and assume financial responsibility for certain tort litigation and environmental  
 4 remediation related to the chemicals business.

5       2.13 Monsanto represented in a recent Form 10-K (for the fiscal year ending  
 6 August 31, 2016): "Monsanto is involved in environmental remediation and legal  
 7 proceedings to which Monsanto is party in its own name and proceedings to which its  
 8 former parent, Pharmacia LLC ('Pharmacia') or its former subsidiary, Solutia, Inc.  
 9 ('Solutia') is a party but that Monsanto manages and for which Monsanto is responsible  
 10 pursuant to certain indemnification agreements. In addition, Monsanto has liabilities  
 11 established for various product claims. With respect to certain of these proceedings,  
 12 Monsanto has established a reserve for the estimated liabilities." The document specifies  
 13 that the company holds \$545,000,000.00 in that reserve.

14       2.14 For the Monsanto Defendants' wrongdoing that lead to PCB contamination  
 15 and toxic poisonings at the school buildings in this case, Monsanto, Solutia, and  
 16 Pharmacia are liable to the Plaintiffs under state tort law. These Defendants may be  
 17 obligated to one another in contract for PCB tort liabilities as set out in their complex  
 18 corporate agreements, but that is not the subject of this lawsuit. For purposes of this  
 19 Complaint, these Defendants are referred to as "Monsanto."

20       2.15 Monsanto's conduct is a legal cause of damages to the Plaintiffs because  
 21 the old Monroe Middle School / Sky Valley Education Center school never would have  
 22 become contaminated with "extremely toxic" PCBs if Monsanto had not intentionally  
 23 produced and promoted PCBs in building construction applications.

24       2.16 Union High School District No. 402 is a Washington school district  
 25 ("School District").

26       2.17 According to tax assessor records, Union High is the owner of the land and  
 27 school buildings formerly known as Monroe High School (1950-1977), Monroe Junior  
 28 High (1977-1987), Monroe Middle School (1987-2011), and now known as the Sky

1 Valley Education Center (2011-present), located at 351 Short Columbia Street at Hill and  
2 Kelsey Streets, in Monroe. In this Complaint, this location may be referred to as Sky  
3 Valley Education Center, Sky Valley, or the school buildings.

4       2.18 The Snohomish Health District (“Health District”) is a Washington  
5 independent special purpose district. It is the municipal corporation responsible for public  
6 health in Snohomish County, in part by inspecting and enforcing minimal environmental  
7 safety requirements in educational facilities, including the school buildings in this case.

8       **B. Identities of the Plaintiffs.**

9       2.19 The Plaintiffs are residents of the State of Washington.

10      2.20 Plaintiffs Angela B. Heit, Sandra K. Johnson, Catherine A. Karlsen, Polly  
11 A. Muller, Laura A. Navone, Robin C. Oestreich, Daniel S. Pierce, and Jennifer M.  
12 Toutonghi were teachers and staff members at the old Monroe Middle School / Sky  
13 Valley Education Center. They were employed by non-party Monroe School District.  
14 Due to the Defendants’ wrongful conduct, the Plaintiffs were exposed to toxic chemicals  
15 and have suffered adverse medical consequences.

16      2.21 Plaintiff Nicolas L. Heit is spouse to Angela B. Heit, who was exposed to  
17 toxic chemicals at the school.

18      2.22 The Plaintiffs were harmed due to the corporate and governmental  
19 wrongdoing of the Defendants. The Plaintiffs bring claims against the Defendants for  
20 products liability and negligence. The Plaintiffs bring claims for personal injuries as well  
21 as societal and consortium injuries to their spouses.

22       **III. VENUE AND JURISDICTION**

23       **A.       Venue is proper in King County.**

24      3.1 King County venue is proper because one or more of the Monsanto  
25 Defendants transacts business in King County, including Monsanto, Solutia, and/or  
26 Pharmacia. RCW 4.12.025(1).

27      3.2 King County venue is also proper to the extent any Defendant alleges legal  
28 fault to a third-party corporate resident of King County. Such corporation may be cross-

1 claimed against or added in an amended complaint by Plaintiffs.

2       3.3 King County venue is also proper to the extent any Defendant alleges legal  
3 fault to third-party Snohomish County and if the County becomes a party.

4       **B. King County Superior Court has jurisdiction.**

5       3.4 This Court has jurisdiction over this case. Wash. Const. Art. 4, §6; RCW  
6 2.08.010; RCW 4.12.020(3).

7       **IV. COMPLIANCE WITH STATUTORY NOTICE REQUIREMENTS**

8       **A. Plaintiffs complied with the statutory claim notice requirements and waiting  
9 periods for the following public entity Defendants:**

10      4.1 Union High School No. 402; and

11      4.2 Snohomish Health District.

12       **B. Plaintiffs are not required to give any statutory claim notice to the following  
13 non-public entity Defendants:**

14      4.3 Monsanto Company;

15      4.4 Solutia, Inc.; or

16      4.5 Pharmacia LLC, f/k/a Pharmacia Corporation.

17       **V. FACTS REGARDING CONTAMINATION, EXPOSURE, AND POISONING**

18       **A. Monsanto produced and promoted PCBs from the 1930s to the 1970s.**

19       5.1 Polychlorinated biphenyls, or “PCBs,” are mixtures of synthetic organic  
20 chemicals comprised of chlorine atoms attached to a double carbon-hydrogen ring (a  
21 “biphenyl” ring). U.S. EPA. PCBS: CANCER DOSE-RESPONSE ASSESSMENT AND  
22 APPLICATION TO ENVIRONMENTAL MIXTURES (1996) at 1. U.S. Environmental  
23 Protection Agency, Office of Research and Development, National Center for  
24 Environmental Assessment, Washington Office, Washington, DC, EPA/600/P-96/001F,  
25 1996, available at <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=12486> (last  
26 accessed November 6, 2017). “Different mixtures can take on forms ranging from oily  
27 liquids to waxy solids.” *Id.*

28       5.2 PCBs are comprised of many similar semi-volatile chemicals called

1 congeners. A “PCB congener” is any single, unique chemical compound in the PCB  
 2 category. Two hundred nine congeners have been identified.

3       5.3 From approximately the 1930s to 1977, Monsanto was the only  
 4 manufacturer in the United States that intentionally produced and promoted PCBs for  
 5 commercial use. *Environmental Defense Fund v. Environmental Protection Agency*, 636  
 6 F.2d 1267, 1281 fn 37 (1980) (“From the sparse legislative history of § 6(e), it also  
 7 appears that Congress focused its attention on the deliberate use, manufacture, and  
 8 distribution of PCBs. Throughout the congressional debate, members of Congress  
 9 referred to Monsanto Company as the sole producer of PCBs. See 122 Cong.Rec. 8294  
 10 (1976), reprinted in Legislative History, *supra* note 7, at 240 (Senator Tunney, speaking  
 11 in support of the section, referred to Monsanto as the “sole domestic manufacturer of  
 12 PCB’s”); *id.* at 27187, reprinted in Legislative History, *supra* note 7, at 588  
 13 (Congressman Leggett, speaking in support of the corresponding section in the House  
 14 bill, referred to Monsanto as “the only American manufacturer of PCB’s”).”). *See also*  
 15 116 Cong. Record 11,695, 91st Congress, (April 14, 1970) (“Insofar as the Monsanto  
 16 Co., the sole manufacturer of PCB’s is concerned....”) and 121 Cong. Record 33879, 94th  
 17 Congress, (October 23, 1975) (“The sole U.S. producer, Monsanto Co.....”); *and see* Sky  
 18 Valley Complaint, **Exhibit A** (from *City of Spokane v. Monsanto Co.*, Case 2:15-cv-  
 19 00201-SMJ, ECF No. 1-1 (E.D. Wash. July 31, 2015), Bates Nos. MONS 058730-  
 20 058752, entitled “PCB Presentation to Corporate Development Committee”) at MONS  
 21 058733 (identifying other producers as “all ex-USA”).

22       5.4 The most common trade name for PCBs in the United States is “Aroclor.”  
 23 21 CFR § 500.45(a) (“Polychlorinated biphenyls (PCBs) represent a class of toxic  
 24 industrial chemicals manufactured and sold under a variety of trade names, including  
 25 Aroclor (United States”).

26       5.5 Aroclor is a name that was trademarked by Monsanto.

27       5.6 “Between 1929 and 1977, more than 1.25 billion pounds of PCBs were  
 28 produced in the United States.” Agency for Toxic Substances and Disease Registry

1 (ATSDR). 2014. Case Studies in Environmental Medicine: Polychlorinated Biphenyls  
 2 (PCBs) Toxicity. Atlanta, GA: U.S. Department of Health and Human Services, at 21,  
 3 available at <https://www.atsdr.cdc.gov/csem/csem.asp?csem=30&po=10>, last visited on  
 4 November 7, 2017.

5 **B. Monsanto's PCBs are "extremely toxic" synthetic chemicals.**

6 5.7 "PCBs are extremely toxic to humans and wildlife." *Environmental*  
 7 *Defense Fund v. Environmental Protection Agency*, 636 F.2d 1267, 1270 (D.C. Cir.  
 8 1980).

9 5.8 PCBs are a "keystone pollutant" and "a prime motivator for the enactment  
 10 of TSCA," the Toxic Substances Control Act. "By most accounts, PCBs are the  
 11 archetypical chemical villains against which the contemporary pollution laws are  
 12 directed." William H. Rodgers, Jr. and Elizabeth Burleson, *Polychlorinated biphenyls*  
 13 (*PCBs*), 3 Envtl. L. (West) §6:9 (July 2017) (internal citations omitted).

14 5.9 By the late 1970s, the United States banned the "manufacture, processing,  
 15 distribution in commerce, and use of polychlorinated biphenyls (PCBs)." 44 Fed. Reg.  
 16 31514 (May 31, 1979). The ban remains in effect. "The TSCA prohibits the manufacture,  
 17 processing, distribution, and use (other than in a 'totally enclosed manner') of  
 18 polychlorinated biphenyls (PCBs) unless the EPA determines that the activity will not  
 19 result in an 'unreasonable risk of injury to health or the environment.'" *General Electric*  
 20 *Co. v. EPA*, 290 F.3d 377 (D.C. Cir. 2002) (holding that an EPA-issued guidance  
 21 document was a legislative rule requiring prior notice and opportunity for public  
 22 comment), citing 15 U.S.C. § 2605(e) (2) & (3).

23 5.10 PCBs are "among the most stable chemicals known and decompose very  
 24 slowly once they are in the environment... In the environment, **PCBs are toxic at low**  
 25 **concentrations to a wide variety of species**, marine mammals included. Once PCBs  
 26 reach the environment, they tend to stay there, or move slowly in damaging cycles..."  
 27 William H. Rodgers, Jr. and Elizabeth Burleson, *Polychlorinated biphenyls (PCBs)*, 3  
 28 Envtl. L. (West) §6:9 (July 2017) (emphasis added), citing in part Response to Exemption

Petitions, 50 Fed. Reg. 35,184 (August 29, 1985) (“**PCBs are also toxic to mammals at very low exposure levels.** The survival rate and reproductive success of fish can be adversely affected in the presence of PCBs. Various sublethal physiological effects attributed to PCBs have been recorded in the literature”) (emphasis added); *see also* 21 CFR § 500.45(a) (“Since PCBs are toxic chemicals, the PCB contamination of food as a result of these and other incidents represent a hazard to public health.”).

5.10.1 “For humans, exposures cause acute effects such as skin rashes, vomiting, abdominal pain, and temporary blindness and are suspected of causing birth defects, miscarriages, and cancer.” William H. Rodgers, Jr. and Elizabeth Burleson, *Polychlorinated biphenyls (PCBs)*, 3 Envtl. L. (West) §6:9 (July 2017) (internal citations omitted). *See also Solutia, Inc. v. McWane, Inc.*, 726 F. Supp. 2d 1316, 1319 (N.D. Ala. 2010) (“PCBs have been found to cause cancer, decreased fertility, still births, and birth defects in test animals.”) (Monsanto cleanup contribution case), citing *Dickerson, Inc. v. United States*, 875 F.2d 1577, 1579, 1583 (11th Cir.1989) (“PCBs are highly toxic chemicals frequently used in electrical transformers... Scientists have found PCB concentrations far below those involved in this case to cause cancer, decreased fertility, still births, and birth defects in test animals.”) (affirming judgment against the United States for PCB liability). Both *Solutia, Inc.* and *Dickerson* cited *Environmental Defense Fund v. Environmental Protection Agency*, 636 F.2d 1267 (D.C. Cir. 1980), *infra*.

5.11 The *Environmental Defense Fund* decision summarized research available to the scientific community by the late 1970s:

Polychlorinated biphenyls (PCBs) have been manufactured and used commercially for fifty years for their chemical stability, fire resistance, and electrical resistance properties. They are frequently used in electrical transformers and capacitors. However, PCBs are extremely toxic to humans and wildlife. The extent of their toxicity is made clear in the EPA Support Document accompanying the final regulations, in which the EPA Office of Toxic Substances identified several adverse effects resulting from human and wildlife exposure to PCBs.

Epidemiological data and experiments on laboratory animals indicate that exposure to PCBs pose carcinogenic and other risks to humans.

1 Experimental animals developed tumors after eating diets that included  
 2 concentrations of PCBs as low as 100 parts per million (ppm). Experiments  
 3 on monkeys indicate that diets with PCB concentrations of less than ten  
 4 ppm reduce fertility and cause still births and birth defects. Other data show  
 5 that PCBs may adversely affect enzyme production, thereby interfering  
 6 with the treatment of diseases in humans. Support Document, *supra* note 4,  
 7 at 9-18.

8 EPA has found that PCBs will adversely affect wildlife as well as humans.  
 9 Concentrations below one ppb (part per billion) are believed to impair  
 10 reproductivity of aquatic invertebrates and fish. Some birds suffered  
 11 “severe reproductive failure” when fed diets containing concentrations of  
 12 only ten ppm of PCBs. *Id.* at 19. Because PCBs collect in waterways and  
 13 bioaccumulate in fish, fish-eating mammals run a special risk of adverse  
 14 effects. Such mammals may have “significantly higher concentrations of  
 15 PCBs in their tissues than the aquatic forms they feed on.” *Id.* at 36.

16 EPA estimates that by 1975 up to 400 million pounds of PCBs had entered  
 17 the environment. Approximately twenty-five to thirty percent of this  
 18 amount is considered “free,” meaning that it is a direct source of  
 19 contamination for wildlife and humans. The rest, “mostly in the form of  
 20 industrial waste and discarded end use products, is believed to be in landfill  
 21 sites and thus constitutes a potential source of new free PCBs.” *Id.* at 33-34.  
 22 Other significant sources of PCBs include atmospheric fallout and spills  
 23 associated with the use or transportation of PCBs. *Id.* at 29.

24 EPA concluded in the Support Document that “the additional release of  
 25 PCBs” into the environment would result in widespread distribution of the  
 26 PCBs and “will eventually expose large populations of wildlife and man to  
 27 PCBs.” *Id.* at 36-37. EPA concluded further that:

28 As a practical matter, it is not possible to determine a “safe”  
 29 level of exposure to these chemicals. Because PCBs are  
 30 already widely distributed throughout the \*1271 biosphere,  
 31 they currently pose a significant risk to the health of man as  
 32 well as that of numerous other living things. As a  
 33 consequence, any further increase in levels of PCBs in the  
 34 biosphere is deemed undesirable by EPA.

35 *Id.* at 38. Because “PCBs released anywhere into the environment will  
 36 eventually enter the biosphere ... EPA has determined that any such release  
 37 of PCBs must be considered ‘significant.’” *Id.*

In 1972, Monsanto, the major American manufacturer of PCBs, limited its sales of PCBs to manufacturers of transformers and capacitors. It ceased all manufacture of PCBs in 1977 and shipped the last of its inventory before the end of that year. Today, PCBs are produced in this country only as incidental byproducts of industrial chemical processes. There are no known natural sources of PCBs. *Id.* at 2.

*Environmental Defense Fund v. Environmental Protection Agency*, 636 F.2d 1267, 1270-71 (D.C. Cir. 1980) (holding, in part, that there was no substantial evidence to support EPA's decision to establish a regulatory cutoff below 50 ppm).

5.12 The decision made other findings: "Most importantly, EPA expressly found that any exposure of PCBs to the environment or humans could cause adverse effects." *Environmental Defense Fund*, 636 F.2d at 1283-84.

5.13 **Closed PCB systems develop leaks.** Another issue in the decision related to the regulation of non-enclosed uses of PCBs, such as "carbonless paper, paints, coatings, soaps, and copying ink toners," versus so-called "totally enclosed uses" of PCBs such as "transformers, capacitors, and electromagnets." *Environmental Defense Fund*, 636 F.2d at 1285. The court ruled against the EPA on this artificial distinction because of something that is also true in this case: "put simply, closed systems develop leaks." *Id.* at 1285; *see also* 1286 (witness "recognized that environmental losses can occur through accidental rupture or leakage.").

5.14 In the years following the ban, the EPA confirmed that PCBs are toxic, may cause reproductive and developmental effects, and may cause tumors ("oncogenic potential") in people exposed:

*Health effects.* EPA has determined that PCBs are toxic and persistent. PCBs can enter the body through the lungs, gastrointestinal tract, and skin, circulate throughout the body, and be stored in the fatty tissue.

Available animal studies indicate an oncogenic potential, the degree to which would depend on exposure... Further epidemiological research is needed to correlate human and animal data, but EPA finds no evidence to suggest that the animal data would not predict an oncogenic potential in humans.

In addition, EPA finds that PCBs may cause reproductive effects, developmental toxicity, and oncogenicity in humans exposed to PCBs. Available data show that some PCBs have the ability to alter reproductive processes in mammalian species, sometimes even at doses that do not cause other signs of toxicity. Animal data and limited available human data indicate that prenatal exposure to PCBs can result in various degrees of developmental toxic effects. Postnatal effects have been demonstrated in immature animals following exposure to PCBs prenatally and via breast milk.

In some cases chloracne may occur in humans exposed to PCBs. Severe cases of chloracne are painful and disfiguring, and symptoms may persist for an extended time...

50 Fed. Reg. 35182, 35183-84 (August 29, 1985).

5.15 The EPA also determined that Monsanto's PCBs are probable human carcinogens. In 1996, the EPA reassessed PCB carcinogenicity based on data related to Aroclors 1016, 1242, 1254, and 1260. The EPA's cancer reassessment was peer reviewed by experts on PCBs, including scientists from government, academia, and industry. U.S. EPA. PCBs: Cancer Does-Response Assessment and Application to Environmental Mixtures (1996). U.S. EPA, Office of Research and Development, National Center for Environmental Assessment, Washington Office, Washington, DC, EPA/600/P-96/001F, 1996, available at <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=12486> (last accessed November 6, 2017).

5.16 This EPA report found that “[j]oint consideration of cancer studies and environmental processes leads to a conclusion that environmental PCB mixtures are highly likely to pose a risk of cancer to humans.” *Id.* at 57. In addition, “PCBs persist in the body, providing a continuing source of internal exposure after external exposure stops. There may be greater-than-proportional effects from less-than-lifetime exposure, especially for persistent mixtures and for early-life exposure.” *Id.* at 58-59.

5.17 The 1996 EPA report also noted that “PCBs also have significant ecological and human health effects other than cancer, including neurotoxicity, reproductive and developmental toxicity, immune system suppression, liver damage, skin

1 irritation, and endocrine disruption. Toxic effects have been observed from acute and  
 2 chronic exposures to PCB mixtures with varying chlorine content.” *Id.* at vi.

3       5.18 In 2000, the Agency for Toxic Substances and Disease Registry (ATSDR),  
 4 issued a public health statement regarding PCB exposure. It noted that “[s]kin conditions,  
 5 such as acne and rashes, may occur in people exposed to high levels of PCBs... Some  
 6 studies in workers suggest that exposure to PCBs may also cause irritation of the nose  
 7 and lungs, gastrointestinal discomfort, changes in the blood and liver, and depression and  
 8 fatigue.” Agency for Toxic Substances and Disease Registry (ATSDR). 2000.  
 9 Toxicological profile for polychlorinated biphenyls (PCBs). Atlanta, GA: U.S.  
 10 Department of Health and Human Services, Public Health Service, at 4. The public health  
 11 statement summarized experimental animal studies finding liver damage, anemia, acne-  
 12 like skin conditions, stomach injuries, thyroid injuries, kidney damage, impaired immune  
 13 system function, behavioral alterations, endocrine disruption, and impaired reproduction.  
 14 *Id.* at 5.

15       5.19 **Children are more vulnerable to PCB exposure.** The 2000 ATSDR  
 16 statement also summarized studies tending to show effects in PCB-exposed children: low  
 17 birthweight; problems with motor skills; decreases in short-term memory; and effects on  
 18 the immune system. *Id.* at 6. The report noted that children are more vulnerable to PCB  
 19 exposure than adults, although the routes of exposure are the same:

20       Children are exposed to PCBs in the same way as are adults: by eating  
 21 contaminated food, breathing indoor air in buildings that have electrical  
 22 devices containing PCBs, and drinking contaminated water. Because of  
 23 their smaller weight, children’s intake of PCBs per kilogram of body  
 24 weight may be greater than that of adults.  
 25 ...

26       It is possible that children could be exposed to PCBs following transport of  
 27 the chemical on clothing from the parent’s workplace to the home. House  
 28 dust in homes of workers exposed to PCBs contained higher than average  
 levels of PCBs. PCBs have also been found on the clothing of firefighters  
 following transformer fires. The most likely way infants will be exposed is  
 from breast milk that contains PCBs. Fetuses in the womb are also exposed  
 from the exposed mother.

....

Because the brain, nervous system, immune system, thyroid, and reproductive organs are still developing in the fetus and child, the effects of PCBs on these target systems may be more profound after exposure during the prenatal and neonatal periods, making fetuses and children more susceptible to PCBs than adults.

*Id.* at 5-6. In addition, “Younger children may be particularly vulnerable to PCBs because, compared to adults, they are growing more rapidly and generally have lower and distinct profiles of biotransformation enzymes, as well as much smaller fat deposits for sequestering the lipophilic PCBs.” *Id.* at 381.

**5.20 Children are not small adults.** The ATSDR toxicological profile for PCBs reiterated these developmental concerns while cautioning against the fallacy that children possess the same level of resilience to toxic exposure as adults: “Children are not small adults... Children also have a longer remaining lifetime in which to express damage from chemicals; this potential is particularly relevant to cancer.” *Id.* at 380-81.

**5.21 Workplace PCB exposure can contaminate homes.** The ATSDR statement reiterated that workplace exposure to PCBs can result in the worker’s home becoming contaminated with PCBs: “If you are exposed to PCBs in the workplace, it may be possible to carry them home from work... If this is the case, you should shower and change clothing before leaving work, and your work clothes should be kept separate from other clothes and laundered separately.” *Id.* at 7.

**5.22 PCB exposure and cardiovascular damage.** A 2011 ATSDR addendum to the toxicological profile for PCBs reported on more recent research, including animal studies showing cardiovascular damage following PCB exposure. Agency for Toxic Substances and Disease Registry (ATSDR). 2011. Addendum to the toxicological profile for polychlorinated biphenyls (PCBs). Atlanta, GA: U.S. ATSDR, Division of Toxicology and Environmental Medicine, at 1.

**5.23 PCB exposure and type 2 diabetes.** The 2011 addendum reported research that “PCB exposure was strongly related to prevalence of type 2 diabetes mellitus.” *Id.* at

1 2-3.

2       **5.24 PCB exposure and deficient immune function.** The 2011 addendum  
 3 reported research “suggesting possible impaired immunologic development” in children,  
 4 and the results of another study that “implied that exposure to PCBs is a possible cause of  
 5 deficient immune function in children.” *Id.* at 4.

6       **5.25 PCB exposure and neurodegenerative diseases.** The 2011 addendum  
 7 reported other research “that exposure to PCBs likely has an effect on neurodegenerative  
 8 diseases for women but not men,” including amyotrophic lateral sclerosis (ALS, also  
 9 known as motor neuron disease), Parkinson’s disease, and dementia. *Id.* at 4.

10      **5.26 PCB exposure and neurobehavioral effects, anxiety.** The 2011 addendum  
 11 reported animal studies research “that exposure to PCBs may exert anxiogenic  
 12 behavior.” *Id.* at 5. An anxiogenic substance is one that causes anxiety.

13      **5.27 PCB exposure and central nervous system effects.** The 2011 addendum  
 14 reported animal studies research showing inhibited and depressed central nervous system  
 15 effects following PCB exposure. *Id.* at 5-6.

16      **5.28 PCB exposure and children’s permanent teeth.** The 2011 addendum  
 17 reported human studies showing “a dose-response relationship between PCB exposure  
 18 and development enamel defects of permanent teeth in children.” *Id.* at 7.

19      **5.29 PCB exposure and sexual development.** The 2011 addendum reported  
 20 human studies research showing impaired sexual development, including a positive  
 21 association between high total PCB concentrations and cryptorchidism (undescended  
 22 testicles) in boys. Another study “suggested that even low levels of PCBs had a robust  
 23 negative impact on gonadal hormones in newborns.” *Id.* at 7-8. Another study of girls  
 24 exposed to PCBs “suggested that even at low levels of estrogenic PCBs, the time to  
 25 menarche attainment was decreased,” and the “median age at menarche for this cohort  
 26 (138 girls) was 12.2 years.” *Id.* at 9. Another study found “that exposure to certain PCB  
 27 congeners may interfere with human reproductive development” in both boys and girls.  
 28 *Id.* at 9. Animal studies also found “dose-related prolongation of the estrous cycle in

1 female offspring," and "changes in body weight, body length, tail length, and weights of  
 2 kidneys, testes, ovaries, and uterus." *Id.* at 9.

3       **5.30 Broad spectrum of effects.** A 2014 ATSDR publication stated that  
 4 occupational exposure to PCBs can result in a "broad spectrum of effects that includes  
 5 increased levels of some liver enzymes, with possible hepatic damage, chloracne and  
 6 related dermal lesions, and respiratory problems." Agency for Toxic Substances and  
 7 Disease Registry (ATSDR). 2014. Case Studies in Environmental Medicine:  
 8 Polychlorinated Biphenyls (PCBs) Toxicity. Atlanta, GA: U.S. Depart. of Health and  
 9 Human Services, at 39, available at <https://www.atsdr.cdc.gov/csem/csem.asp?csem=30&po=10>,  
 10 last visited on November 7, 2017. The following information references this 2014  
 11 ATSDR publication.

12       **5.31 Acute exposure to PCBs.** Signs and symptoms of acute exposure to PCBs  
 13 can include chloracne, eye irritation, nausea, vomiting, and elevated liver enzymes and  
 14 altered liver function. *Id.* at 55-56.

15       **5.32 Chronic exposure to PCBs.** Signs and symptoms of chronic exposure to  
 16 PCBs can include abdominal pain, anorexia, jaundice, nausea, vomiting, weight loss,  
 17 uroporphyrin, headache, dizziness, and edema. *Id.* at 56-57.

18       **5.33 Toxic responses to PCBs.** Animal studies have shown that "commercial  
 19 PCBs elicit a broad range of toxic responses including:

- 20           • Acute lethality,
- 21           • Body weight loss,
- 22           • Carcinogenesis,
- 23           • Dermal toxicity,
- 24           • Fatty liver,
- 25           • Genotoxicity,
- 26           • Hepatomegaly,
- 27           • Immunosuppressive effects,
- 28           • Neurotoxicity,
- Porphyria,
- Reproductive and developmental toxicity,
- Thymic atrophy, and
- Thyroid hormone-level alterations."

1 *Id.* at 39-40.

2       **5.34 Dermatological effects.** “Conclusive evidence that exposure to PCBs  
3 induces adverse dermal effects in humans exists”:

4           Chloracne and related dermal lesions have been reported in workers  
5 occupationally exposed to PCBs.

6           ...  
7           The chin, periorbital, and malar areas are most often involved, although  
8 lesions might also appear in areas not usually affected by acne vulgaris  
9 (e.g., the chest, arms, thighs, genitalia, and buttocks). The most distinctive  
10 lesions are cystic and measure 1-10 mm, although comedonal lesions can  
11 also be present.

12           ...  
13           Chloracne generally indicates systemic toxicity and can be caused by not  
14 only dermal contact but also ingestion of PCBs... Chloracne typically  
15 develops weeks or months after exposure. The lesions are often refractory  
16 to treatment and can last for years or decades.

17           In addition to chloracne, other dermal effects noted some PCB-exposed  
18 workers include pigmentation disturbances of skin and nails, erythema and  
19 thickening of the skin, and burning sensations.

20       *Id.* at 41-42 (internal citations omitted).

21       **5.35 Reproductive and developmental effects.** “Reproductive function may be  
22 disrupted by exposure to PCBs,” and “neurobehavioral and development deficits have  
23 been reported in newborns exposed to PCBs in utero.” *Id.* at 45. Children born to women  
24 exposed to PCBs exhibited statistically significant decreases in gestational age, birth  
25 weight, and head circumference. *Id.* at 43. Higher levels of PCB exposure correlated with  
26 weaker reflexes, greater motor immaturity, and more pronounced startle responses. *Id.* at  
27 43-44. Follow-up studies of the children of that cohort “demonstrated that the effects of  
28 perinatal exposure to PCBs are persistent.” *Id.* at 44. At four years of age, the children  
still had deficits in weight gain, depressed responsiveness, and reduced performance on  
the visual recognition memory test. *Id.* at 44. “At 11 years of age, the children of highly  
exposed mothers were three times more likely than controls to have low full-scale IQ  
scores; twice as likely to lag behind at least 2 years in reading comprehension; and more  
likely to have difficulty paying attention.” *Id.* at 44 (internal citation omitted).

1       **5.36 Endocrine effects.** “The epidemiological studies suggest a link between  
 2 exposure to PCBs and thyroid hormone toxicity in humans.” *Id.* at 46. “Thyroid  
 3 hormones are essential for normal behavioral, intellectual, and neurologic development.  
 4 Thus, the deficits in learning, memory, and attention processes among the offspring of  
 5 women exposed to PCBs are partially or predominantly mediated by alterations in  
 6 hormonal binding to the thyroid hormone receptor.” *Id.* “Recent studies in populations  
 7 exposed to PCBs and chlorinated pesticides found a dose-dependent elevated risk of  
 8 diabetes.” *Id.*

9       **5.37 Hepatic effects.** “Although liver damage is common in animals exposed to  
 10 PCBs, overt hepatotoxicity is uncommon in humans. Exposure to PCBs can increase  
 11 serum levels of hepatic enzymes and can induce microsomal enzyme function.” *Id.* at  
 12 46-48.

13       **5.38 Neurological effects.** Adults exposed to PCBs have been shown to have  
 14 significantly greater motor retardation; poorer results on certain memory and attention  
 15 tests; and higher scores on standardized confusion scale than did control adults. *Id.* at 51.

16       **5.39 Additional adverse effects.** “Occupational and epidemiologic studies have  
 17 suggested or demonstrated other adverse health effects from exposure to PCBs,”  
 18 including cardiovascular, gastrointestinal, genetic, immune, musculoskeletal, and  
 19 neurological systems. *Id.* at 51-52.

20       **5.40 Additional signs and symptoms.** The ATSDR “advises patients to consult  
 21 their physicians if they develop signs or symptoms of PCB exposure such as: appetite  
 22 loss; joint pain; nausea; skin disorders, changes, or discoloration; breast changes or  
 23 lumps; and/or stomach distress and pain.” *Id.* at 68.

24       **5.41 Highly toxic PCDDs and PCDFs.** “Occupational exposure to PCBs may  
 25 be accompanied by exposure to chlorinated dibenzodioxin and dibenzofuran  
 26 contaminants, which are much more toxic than PCBs in comparative animal studies.  
 27 These substances can cause chronic fatigue and elevated liver enzymes.” *Id.* at 57.

28       **5.42 PCBs are a “probable human carcinogen.”** The Department of Health

1 and Human Services and the Environmental Protection Agency “consider PCBs a  
 2 probable human carcinogen.” *Id.* at 51. In addition, and “on the basis of sufficient  
 3 evidence of carcinogenicity in humans and experimental animals, the IARC  
 4 [International Agency for Research on Cancer] classified PCBs as carcinogenic to  
 5 humans.” *Id.* PCB exposure has been linked to cancers of the liver, gallbladder, biliary  
 6 tract, brain, stomach, intestinal, thyroid, myeloma (cancer of plasma cells, which can  
 7 damage the bones, immune system, kidneys, and red blood cell count), non-Hodgkin  
 8 lymphoma (a cancer that starts in the lymphatic system), and the skin, such as malignant  
 9 melanomas. *Id.* at 48-50. In addition, “data from animal studies have shown that PCBs  
 10 cause gastrointestinal tract tumors, hepatocarcinomas, leukemia, lymphomas, and  
 11 pituitary tumors.” *Id.* at 50.

12       **5.43 IARC: “PCBs are carcinogenic to humans.”** In 2016, the International  
 13 Agency for Research on Cancer published an assessment on the carcinogenicity of PCBs.  
 14 International Agency for Research on Cancer. IARC monographs on the evaluation of  
 15 carcinogenic risks to humans, volume 107. Polychlorinated and Polybrominated  
 16 Biphenyls (2016), available at <http://monographs.iarc.fr/ENG/Monographs/vol107/index.php> (last  
 17 accessed November 6, 2017. The IARC report concluded, “There is *sufficient evidence* in  
 18 humans for the carcinogenicity of polychlorinated biphenyls (PCBs). PCBs cause  
 19 malignant melanoma. Positive associations have been observed for non-Hodgkin  
 20 lymphoma and cancer of the breast... PCBs are *carcinogenic to humans.*” *Id.* at 439  
 21 (emphasis in original).

22       **5.44 Wide range of cancers and lesions.** Animal and human studies show  
 23 associations between PCB exposure and other cancers and lesions not specifically  
 24 enumerated above. These can include prostate cancer, testicular cancer, pancreatic  
 25 cancer, lung cancer, mouth cancer, uterine cancer, and non-neoplastic lesions of the liver,  
 26 thyroid gland, ovary, oviduct, uterus, lung, adrenal cortex, pancreas, kidney, heart,  
 27 thymus, spleen, clitoral gland, mesenteric artery, oral mucosa, bone marrow, and bladder.  
 28 *See, e.g.,* Agency for Toxic Substances and Disease Registry (ATSDR). 2011. Addendum

1 to the toxicological profile for polychlorinated biphenyls (PCBs). Atlanta, GA: U.S.  
 2 ATSDR, Division of Toxicology and Environmental Medicine, at 10-14.

3 **C. Monsanto knew PBCs were toxic, but promoted them without warnings.**

4 5.45 “Monsanto was well aware of scientific literature published in the 1930s  
 5 that established that inhalation of PCBs in industrial settings resulted in toxic systemic  
 6 effects in humans.” State of Washington’s Complaint for Damages against Monsanto, p.  
 7 12, ¶ 49, Case No. 16-2-29591-6, King County Superior Court (Dec. 8, 2016).

8 5.46 A 1937 Monsanto memorandum advised that “Experimental work in  
 9 animals shows that prolonged exposure to Aroclor vapors evolved at high temperatures or  
 10 by repeated oral ingestion will lead to systemic toxic effects. Repeated bodily contact  
 11 with the liquid Aroclors may lead to an acne-form skin eruption.” *Id.* at ¶ 50; *see* Sky  
 12 Valley Complaint, **Exhibit B** (from *City of Spokane v. Monsanto Co.*, Case 2:15-cv-  
 13 00201-SMJ, ECF No. 1-2 (E.D. Wash. July 31, 2015), MONS 061332).

14 5.47 A 1955 memorandum entitled “AROCLOR TOXICITY” by Monsanto  
 15 Medical Director Emmet Kelly summarized Monsanto’s position on PCB toxicity: “We  
 16 know Aroclors are toxic but the actual limit has not been precisely defined. It does not  
 17 make too much difference, it seems to me, because our main worry is what will happen if  
 18 an individual develops any type of liver disease and gives a history of Aroclor exposure. I  
 19 am sure the juries would not pay a great deal of attention to MACs [maximum allowable  
 20 concentrates].” State of Washington’s Complaint for Damages against Monsanto, p. 12, ¶  
 21 51, Case No. 16-2-29591-6, King County Superior Court (Dec. 8, 2016); *see* Sky Valley  
 22 Complaint, **Exhibit C** (from *City of Spokane v. Monsanto Co.*, Case 2:15-cv-00201-SMJ,  
 23 ECF No. 1-3 (E.D. Wash. July 31, 2015), MONS 095196-97) at 2.

24 5.48 A 1955 “CONFIDENTIAL” memorandum by Monsanto’s Medical  
 25 Department stated that workers should not be allowed to eat lunch in the Aroclor  
 26 department. Three reasons were provided, including the fact that “Aroclor vapors and  
 27 other process vapors could contaminate the lunches unless they were properly protected.”  
 28 *See* Sky Valley Complaint, **Exhibit D** (from *City of Spokane v. Monsanto Co.*, Case 2:15-

1 cv-00201-SMJ, ECF No. 1-4 (E.D. Wash. July 31, 2015) at 2.

2       5.49 In addition, after noting that “the chance of contaminating hands and  
 3 subsequently contaminating the food is a definite possibility,” the Medical Department  
 4 stated that

5       It has long been the opinion of the Medical Department that eating in  
 6 process departments is a potentially hazardous procedure that could lead to  
 7 serious difficulties. While the Aroclors are not particularly hazardous from  
 8 our own experience, this is a difficult problem to define because **early  
 literature work claimed that chlorinated biphenyls were quite toxic  
 materials by ingestion or inhalation.** In any case where a workman  
 9 claimed physical harm from any contaminated food, it would be extremely  
 10 difficult on the basis of past literature reports to counter such claims.

11 *Id.* (emphasis added); *see also* State of Washington’s Complaint for Damages against  
 12 Monsanto, pp. 12-13, ¶ 52, Case No. 16-2-29591-6, King County Superior Court (Dec. 8,  
 13 2016).

14       5.50 A 1957 internal memorandum by Monsanto Medical Director Emmet Kelly  
 15 reported that, after it conducted its own tests, the U.S. Navy decided against using  
 16 Monsanto’s Aroclors: “No matter how we discussed the situation, it was impossible to  
 17 change their thinking that [Aroclor-containing] Pydraul 150 is just too toxic for use in a  
 18 submarine.” State of Washington’s Complaint for Damages against Monsanto, p. 13, ¶  
 19 53, Case No. 16-2-29591-6, King County Superior Court (Dec. 8, 2016); *see* Sky Valley  
 20 Complaint, **Exhibit E** (from *City of Spokane v. Monsanto Co.*, Case 2:15-cv-00201-SMJ,  
 21 ECF No. 1-5 [E.D. Wash. July 31, 2015]) at 2.

22       5.51 Therefore, by the 1950s, Monsanto knew that its PCBs a/k/a “Aroclors are  
 23 toxic but the actual limit has not been precisely defined.” *Supra* at ¶ V.C.3. Perhaps  
 24 reflecting on this, Monsanto’s Medical Director Kelly made the reasonable observation  
 25 that “juries would not pay a great deal of attention” to exposure limits set by the industry.  
 26 *Id.* This is reasonable because so-called exposure limits have not been based on human  
 27 subject testing, which would be unethical. Instead, the industry extrapolated so-called  
 28 human exposure limits from laboratory tests of small mammals like rats, guinea pigs,

1 rabbits, and dogs, who have a limited ability to report or demonstrate complaints  
 2 following PCB exposure before dying—or being killed—and then dissected for the  
 3 pathological examination of lesions. *See, e.g.*, **Exhibits L and R**. Regardless, Monsanto  
 4 also knew that “early literature work claimed that chlorinated biphenyls were quite toxic  
 5 materials by ingestion or inhalation.” *Supra* at ¶ V.C.5.

6       5.52 In 1966 or 1967, Monsanto Medical Director Emmet Kelly reviewed a  
 7 scientific presentation by University of Stockholm researcher Soren Jensen, who stated  
 8 that PCBs “appear to be the most injurious chlorinated compounds of all tested.” *See* Sky  
 9 Valley Complaint, **Exhibit F** (from *City of Spokane v. Monsanto Co.*, Case 2:15-cv-  
 10 00201-SMJ, ECF No. 1-6 [E.D. Wash. July 31, 2015]), at JDGFOX00000038 (at  
 11 bottom). Researcher Jensen referred to a 1939 study associating PCBs with the deaths of  
 12 three young workers and concluding that “pregnant women and persons who have at any  
 13 time had any liver disease are particularly susceptible.” *Id.* at JDGFOX00000039.  
 14 Monsanto Medical Director Kelly did not dispute the researcher’s remarks, noting in the  
 15 1967 letter to the Research Division of National Cash Register, that “As far as the section  
 16 on toxicology is concerned, it is true that chloracne and liver trouble can result from large  
 17 doses.” *Id.* at JDGFOX00000037; *see also* State of Washington’s Complaint for  
 18 Damages against Monsanto, p. 13, ¶ 54, Case No. 16-2-29591-6, King County Superior  
 19 Court (Dec. 8, 2016). Medical Director Kelly did not define the term “large doses.”

20       5.53 By the latter half of the 1960s, Monsanto became aware that PCBs were  
 21 causing widespread contamination of the environment. *See* Sky Valley Complaint,  
 22 **Exhibits G, H, and L** (from *City of Spokane v. Monsanto Co.*, Case 2:15-cv-00201-SMJ,  
 23 ECF No. 1-7, 1-8, 1-13 [E.D. Wash. July 31, 2015]); *see also* State of Washington’s  
 24 Complaint for Damages against Monsanto, p. 14, Case No. 16-2-29591-6, King County  
 25 Superior Court (Dec. 8, 2016).

26       5.54 Despite the growing evidence of harm caused to living things by PCB  
 27 contamination, Monsanto remained steadfast in its production of PCBs. *See* State of  
 28 Washington’s Complaint for Damages against Monsanto, p. 19, ¶ 60, Case No. 16-2-

1 29591-6, King County Superior Court (Dec. 8, 2016).

2       5.55 In March of 1969, Monsanto employee W.M. Richard wrote a  
 3 memorandum entitled “AROCLOR WILDLIFE ACCUSATIONS” to Monsanto  
 4 employee Elmer Wheeler. *See* Sky Valley Complaint, **Exhibit I** (from *City of Spokane v.*  
 5 *Monsanto Co.*, Case 2:15-cv-00201-SMJ, ECF No. 1-9 [E.D. Wash. July 31, 2015]),  
 6 Bates No. MONS 096509-11. In the memorandum, Richard responded to a 1968 article  
 7 in *Nature* criticizing PCBs as being (in Richard’s paraphrasing) “a pollutant... a toxic  
 8 substance—with no permissible allowable levels... [and] a toxic substance endangering  
 9 man himself, implying that the [extinction] of the peregrine falcon is a leading indicator  
 10 of things to come.” *Id.* at MONS 096509. Richard also responded to a 1969 article in  
 11 *Science* regarding the Environmental Defense Fund’s legal strategy, which Richard  
 12 summarized in part by writing that

13       These people at EDF are saying we must not put stress on any living thing  
 14 through a change in air or water environment. Eagles, plant life, anything  
 15 which lives or breathes. This group is pushing hard on the extension of the  
 16 word harmful. They claim ‘enzyme inducer’ activity is the real threat of  
 17 DDT and PCB’s and are using these arguments to prove that very small  
 18 amounts of chlorinated hydrocarbons are ‘harmful.’

19       *Id.* (emphasis in original). Richards also explained that Monsanto could take steps to  
 20 reduce PCB releases from its own factories, but he cautioned that “It will be still more  
 21 difficult to control other end uses such as cutting oils, adhesives, plastics, and NCR  
 22 paper. In these applications, exposure to consumers is greater and the disposal problem  
 23 becomes complex.” *Id.* at MONS 096510; *see also* State of Washington’s Complaint for  
 24 Damages against Monsanto, pp. 14-15, Case No. 16-2-29591-6, King County Superior  
 25 Court (Dec. 8, 2016).

26       5.56 During this time period, “the coordination of the Division effort has been  
 27 principally the responsibility W.R. Richard and E.P. Wheeler with support from R.E.  
 28 Keller and Cumming Paton.” *See* Sky Valley Complaint, **Exhibit M** (from *City of Spokane v.*  
*Monsanto Co.*, Case 2:15-cv-00201-SMJ, ECF No. 1-13 [E.D. Wash. July 31,

1 2015]), Bates No. DSW 014623.

2       5.57 In September of 1969, Monsanto employee W.R. Richard wrote an  
 3 interoffice memorandum entitled “DEFENSE OF AROCLOR.” *See* Sky Valley  
 4 Complaint, **Exhibit J** (from *City of Spokane v. Monsanto Co.*, Case 2:15-cv-00201-SMJ,  
 5 ECF No. 1-10 [E.D. Wash. July 31, 2015]), Bates No. DSW 014256-63. The  
 6 memorandum set out Monsanto’s general policy on defending litigation against the  
 7 public: “Make the Govt., States and Universities prove their case.” The memorandum  
 8 acknowledged, however, that Monsanto

9 can’t defend vs. everything. **Some animals or fish or insects will be**  
 10 **harmed.** Aroclor degradation rate will be slow. Tough to defend against.  
 11 Higher chlorination compounds will be worse [than] lower chlorine  
 12 compounds. Therefore we will have to restrict uses and clean-up as much  
 as we can, starting immediately.

13 *Id.* at DSW 014256 (emphasis added). Based on this, Monsanto knew by the late 1960s  
 14 that “some animals or fish or insects will be harmed” in the general environment, where  
 15 PCB contamination is low and diffuse—as opposed to PCB contamination in a more  
 16 enclosed space such as a classroom, as shown below. The 1969 memorandum also  
 17 outlined Monsanto’s plans for challenging scientific studies of the toxicity of PCBs:

18 Monsanto Prove Bioharmless - Limited work at Ind. Bio-test -

"Safe" toxic level for	{ man mammals via fish	Rats	Seek evidence of Biodegradation
		Chickens	Question evidence against us.
	Fish	Question shrimp toxicology especially other toxic chemicals.	
		If Aroclor bad, others must be worse.	

24 Probable Outcome

25 We can prove some things are OK at low concentration.  
 26 Give Monsanto some defense.

27 *Id.* at DSW 014256. The memorandum also outlined Monsanto’s own plans for chronic  
 28 toxicity studies using animals. *Id.* at DSW 014262-63; *see also* State of Washington’s

1 Complaint for Damages against Monsanto, p. 15, ¶ 60, Case No. 16-2-29591-6, King  
 2 County Superior Court (Dec. 8, 2016).

3       5.58 In January of 1970, Elmer Wheeler of Monsanto's Medical Department  
 4 circulated laboratory results of its animal studies. The memorandum was entitled "Status  
 5 of Aroclor Toxicological Studies." *See* Sky Valley Complaint, **Exhibit K** (from *City of*  
 6 *Spokane v. Monsanto Co.*, Case 2:15-cv-00201-SMJ, ECF No. 1-11 [E.D. Wash. July 31,  
 7 2015]), Bates No. MONS 098480. Wheeler stated, "Our interpretation is that **the PCBs**  
 8 **are exhibiting a greater degree of toxicity in this chronic study than we had**  
 9 **anticipated.** Secondly, although there are variations depending on species of animals, the  
 10 PCBs are about the same as DDT in mammals." *Id.* (emphasis added).

11       5.59 Monsanto expressed a desire to keep profiting from PCBs despite the  
 12 research showing PCB toxicity. *See* Sky Valley Complaint, **Exhibit A**. In the "PCB  
 13 Presentation to Corporate Development Committee," Monsanto stated that "Do[ing]  
 14 nothing was considered unacceptable from a legal, moral, customer, public relations &  
 15 company policy viewpoint." *Id.* at MONS 058737. But the alternative of stopping PCB  
 16 production and promotion, and instead going out of the Aroclor business, "was  
 17 considered unacceptable from a Divisional viewpoint... there is too much  
 18 customer/market need and selfishly too much Monsanto profit to go out." *Id.*

19       5.60 Monsanto formed an internal Aroclor Ad Hoc Committee whose objectives,  
 20 "agreed to by the Committee," were to "submit recommendations for action which will:  
 21 1. Permit continued sales and profits of Aroclors and Terphenyls. 2. Permit continued  
 22 development of uses and sales. 3. Protect image of Organic Division and of the  
 23 Corporation." State of Washington's Complaint for Damages against Monsanto, pp. 15-  
 24 16, ¶ 62, Case No. 16-2-29591-6, King County Superior Court (Dec. 8, 2016); *see* Sky  
 25 Valley Complaint, **Exhibit L** (from *City of Spokane v. Monsanto Co.*, Case 2:15-cv-  
 26 00201-SMJ, ECF No. 1-12 [E.D. Wash. July 31, 2015]), Bates No. MONS 030483-86  
 27 ("CONFIDENTIAL MINUTES OF AROCLOR 'AD HOC' COMMITTEE"). Monsanto  
 28 set these business objectives despite knowing that PCBs had been found in the

1 environment, wildlife, and the food chain, as PCBs “may be a global contaminant.” *Id.* In  
 2 these confidential minutes, Monsanto recognized the problem of PCB “environmental  
 3 contamination by customers.” *Id.* at MONS 030485 (“Our in-plant problems are very  
 4 small vs. problems of dealing with environmental contamination by customers.”).

5.61 In October of 1969, Monsanto’s Aroclor “Ad Hoc” Committee issued its  
 6 confidential report. *See* Sky Valley Complaint, **Exhibit M** (from *City of Spokane v.*  
 7 *Monsanto Co.*, Case 2:15-cv-00201-SMJ, ECF No. 1-13 [E.D. Wash. July 31, 2015]),  
 8 Bates No. DSW 014612-24. The committee reported environmental PCB contamination  
 9 causing the killing of marine species and the possible extinction of several species of  
 10 birds. *Id.* at DSW 014615. In addition, “the committee believes that there is no possible  
 11 practical course of action that can so effectively police the uses of these products as to  
 12 prevent completely some environmental contamination.” *Id.* (underscore and  
 13 strikethrough in original). The report outlined a plan to protect Monsanto’s corporate  
 14 interests: “There are, however a number of possible actions which must be undertaken in  
 15 order to prolong the manufacture, sale, and use of these particular Aroclors as well as to  
 16 protect the continued use of other members of the Aroclor series.” *Id.* (strikethrough and  
 17 underscore in original).

5.62 The committee offered recommendations, including notifying PCB  
 “customers of environmental contamination problems.” *Id.* at DSW 014616. The basis for  
 the recommendation, in part, concerned reports of PCB environmental contamination and  
 Monsanto’s knowledge of the mechanisms of PCB releases:

22  
 23  
 24  
 25  
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 28

1 It has been recognized from the beginning that other  
2 functional fluid uses could lead to losses of the  
3 Aroclors to liquid waste streams from the customers'  
4 plants. Losses could occur from spills, unusual  
5 leakage of large volumes and daily losses of smaller  
volumes.

6 It has also been recognized that there could be  
7 vapor losses but it has been felt that these were  
8 perhaps of less significance than the vapor losses  
9 in plasticizer applications. The concern for vapor  
10 losses rises from the published proposed theory that  
even minute quantities of vapors are eventually  
transferred to the water environment and accumulated  
therein.

11 Another possible source of air environmental con-  
12 tamination is the eventual destruction of materials  
13 which have Aroclors in them. Of particular signifi-  
14 cance might be the burning or partial incineration  
of waste or used products containing the Aroclors.

15 *Id.* at DSW 014618.

16 5.63 Despite the environmental damage caused by its PCB products, Monsanto  
17 was clearly concerned about losing the production of PCBs and the associated "sales of  
18 this very profitable series of compounds":

19 Budgetary Considerations

20 The committee recognizes the restrictions placed on  
21 those currently involved by mandates to operate  
22 within normal or proposed reduced budgets. It  
should be clear, however, that the product groups,  
23 the Division and the Corporation are faced with  
an extraordinary situation. There can not be too  
24 much emphasis given to the threat of curtailment  
or outright discontinuance of the manufacture and  
25 sales of this very profitable series of compounds.  
If the products, the Division and the Corporation  
26 are to be adequately protected, adequate funding  
27 is necessary.

28 *Id.* at DSW 014624.

1       5.64 Therefore, by 1970, the escape of PCBs into surrounding environments and  
 2 the resulting contamination was not only reasonably foreseeable, but the problem was  
 3 known to Monsanto. In addition, the escape of Monsanto's PCBs *by PCB customers and*  
 4 *users* into surrounding environments was not only reasonably foreseeable, but was known  
 5 to Monsanto. *See also* State of Washington's Complaint for Damages against Monsanto,  
 6 pp. 23-24, ¶ 99, Case No. 16-2-29591-6, King County Superior Court (Dec. 8, 2016).

7       5.65 By 1970, Monsanto also knew that its PCBs exhibited a greater degree of  
 8 toxicity than Monsanto previously anticipated. *Supra* at ¶ V.C.14.

9       5.66 Despite this knowledge, Monsanto chose not to warn its customers and the  
 10 public regarding the human health dangers of Monsanto's PCBs. Any statements made  
 11 by Monsanto in that regard have been insufficient to convey the actual dangers posed by  
 12 PCBs. Instead, Monsanto's efforts were and continue to be focused on protecting its own  
 13 profits.

14       5.67 An interoffice memorandum circulated in February of 1970 that provided  
 15 talking points for discussions by Monsanto representatives with PCB customers.  
 16 Monsanto informed its PCB representatives that Monsanto "can't afford to lose one  
 17 dollar of business." To that end, Monsanto stated, "We want to avoid any situation where  
 18 a customer wants to return fluid... We would prefer that the customer use up his current  
 19 inventory and purchase [new products] when available. He will then top off with the new  
 20 fluid and eventually all Aroclor 1254 and Aroclor 1260 will be out of his system. We  
 21 don't want to take fluid back." *See* Sky Valley Complaint, **Exhibit N** (from *City of*  
 22 *Spokane v. Monsanto Co.*, Case 2:15-cv-00201-SMJ, ECF No. 1-14 [E.D. Wash. July 31,  
 23 2015]), at 2 (emphasis in original); *see also* State of Washington's Complaint for  
 24 Damages against Monsanto, p. 17, ¶ 67, Case No. 16-2-29591-6, King County Superior  
 25 Court (Dec. 8, 2016).

26       5.68 In roughly this same time period, Monsanto advised public officials that  
 27 Monsanto's PCBs "are not particularly toxic by oral ingestion or skin absorption" and  
 28 "infrequent exposure to PCB vapor should not cause ill effects." *See* Sky Valley

1 Complaint, **Exhibits O** and **P** (from *City of Spokane v. Monsanto Co.*, Case 2:15-cv-  
 2 00201-SMJ, ECF No. 1-15, 1-16 [E.D. Wash. July 31, 2015]); *see also* State of  
 3 Washington's Complaint for Damages against Monsanto, p. 20, ¶ 76, Case No. 16-2-  
 4 29591-6, King County Superior Court (Dec. 8, 2016) ("While the scientific community  
 5 and Monsanto knew that PCBs were toxic and becoming a global contaminant, Monsanto  
 6 repeatedly misrepresented these facts, telling governmental entities the exact opposite—  
 7 that the compounds were not toxic and that the company would not expect to find PCBs  
 8 in the environment in a widespread manner.").

9       5.69 Monsanto also offered the message to a member of Congress that Monsanto  
 10 "cannot conceive how the PCBs can be getting into the environment in a widespread  
 11 fashion." *See* Sky Valley Complaint, **Exhibits Q** (from *City of Spokane v. Monsanto Co.*,  
 12 Case 2:15-cv-00201-SMJ, ECF No. 1-17 [E.D. Wash. July 31, 2015]); *see also* State of  
 13 Washington's Complaint for Damages against Monsanto, p. 21, ¶ 79, Case No. 16-2-  
 14 29591-6, King County Superior Court (Dec. 8, 2016).

15       5.70 Monsanto also represented to another governmental official that "Based on  
 16 available data, manufacturing and use experience, we do not believe the polychlorinated  
 17 biphenyls to be seriously toxic." *See* Sky Valley Complaint, **Exhibit R** (from *City of*  
 18 *Spokane v. Monsanto Co.*, Case 2:15-cv-00201-SMJ, ECF No. 1-18 [E.D. Wash. July 31,  
 19 2015]) at 3; *see also* State of Washington's Complaint for Damages against Monsanto, p.  
 20 21, ¶ 80, Case No. 16-2-29591-6, King County Superior Court (Dec. 8, 2016).

21       5.71 Clearly, Monsanto's knowledge of PCB toxicity deepened between the  
 22 1930s and the 1970s. Despite its knowledge of PCB toxicity, Monsanto intentionally  
 23 produced and promoted PCBs "for use in a wide range of industrial and household goods,  
 24 including electrical equipment, paint, sealants, food cookers, furnaces, floor wax,  
 25 insecticides, lubricants, moisture-proof coatings, papers, asphalt, leather adhesive, and  
 26 stucco." *City of Seattle v. Monsanto Co.*, 237 F. Supp. 3d 1096, 1100 (W.D. Wash. 2017).

27       5.72 "Though Monsanto was aware of PCBs' toxicity and propensity to leach, it  
 28 denied or misrepresented those facts to government investigators. Monsanto continued to

1 manufacture, promote, and profit from its PCBs.” *Id.* (internal citations omitted) (holding  
 2 that Seattle’s claims against Monsanto for public nuisance and equitable indemnity are  
 3 not preempted by Washington’s Product Liability Act (WPLA); Seattle’s common law  
 4 product liability claims are not preempted by WPLA to the extent they arose on or before  
 5 1981; Seattle’s claims are not time-barred; **Seattle stated a claim for public nuisance,**  
 6 **the court rejecting Monsanto’s argument that any intervening acts of third parties**  
 7 **cut off proximate causation, because such acts were foreseeable;** Seattle lacked  
 8 standing to bring product liability claims; Seattle stated a claim for negligence; and  
 9 Seattle failed to allege facts supporting its claim for equitable indemnity).

10       5.73 Monsanto intentionally failed to warn customers and the public regarding  
 11 the toxicity and hazards of its PCB products. *See, e.g., Nevada Power Co. v. Monsanto*  
 12 *Co.*, 955 F.2d 1304, 1306-07 (9th Cir. 1992) (“Nevada Power discovered internal  
 13 documents of the Manufacturers which Nevada Power contends show that the  
 14 Manufacturer’s understanding of the dangers of PCBs in the 1960s and early 1970s was  
 15 much more advanced than the general state of knowledge in the scientific community”)  
 16 (holding, in part, that it was a fact question as to whether Nevada Power’s fraud and  
 17 failure to warn claims were barred by the Nevada statute of limitations).

18       5.74 Monsanto’s PCBs were not reasonably safe in construction because they  
 19 were unsafe—“extremely toxic”—to an extent beyond that which would be contemplated  
 20 by an ordinary consumer. The extreme toxicity of Monsanto’s PCBs was a proximate  
 21 cause of Plaintiffs’ damages.

22       5.75 Monsanto’s PCBs were not reasonably safe as designed under a balancing  
 23 test or under a consumer expectations test, which was a proximate cause of Plaintiffs’  
 24 damages.

25       5.76 Monsanto’s PCBs were an unavoidably unsafe product, which was a  
 26 proximate cause of Plaintiffs’ damages.

27       5.77 Monsanto’s PCBs were not reasonably safe due to inadequate warnings  
 28 when manufactured or after manufacture.

1       5.78 Any Monsanto warnings to the non-Monsanto parties in this case at the  
 2 time of manufacture regarding the extreme toxicity of PCBs, were inadequate and a  
 3 proximate cause of Plaintiffs' damages.

4       5.79 Any Monsanto warnings to the non-Monsanto parties in this case after  
 5 manufacture—and up to the present day—regarding the extreme toxicity of Monsanto's  
 6 PCBs, have been inadequate, which was a proximate cause of Plaintiffs' damages.

7       5.80 Due to their extreme toxicity, Monsanto's PCBs never had a "useful safe  
 8 life."

9       5.81 Monsanto had actual knowledge of the defect and the danger of its PCBs,  
 10 but showed complete indifference or conscious disregard for the safety of others by  
 11 producing and promoting PCBs anyway.

12      **D. PCB-caulking and PCB-light ballasts cause PCB-contamination.**

13       5.82 Monsanto manufactured PCBs that were incorporated by Monsanto's  
 14 customers as plasticizers in caulking, paints, and sealants. In these forms, Monsanto's  
 15 PCBs were used in interior and exterior windows, doors, and masonry joints.

16       5.83 Even today, caulking with high PCB levels are usually still flexible and  
 17 often largely intact.

18       5.84 PCB-caulking emits PCBs, which migrate into the air and nearby materials,  
 19 including adjoining wood, cement, and brick; air and dust inside schools; soil near school  
 20 buildings, and other materials and furnishing.

21       5.85 The following information comes from a publication of the United States  
 22 Environmental Protection Agency (2014, pp. 7-9). Thomas, K. (2014). PCBs in school  
 23 buildings: sensible steps to healthier school environments. Washington, DC: U.S. EPA  
 24 Office of Research and Development.

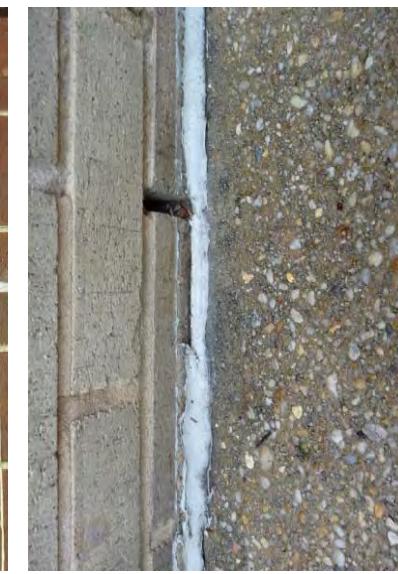
25 //

26 //

27 //

28 //

# PCB Sources – Caulk and Other Sealants



- U.S. Production of Aroclors as a plasticizer ingredient
  - 1958 - 4 million lbs.
  - 1969 - 19 million lbs.
  - 1971 - 0 lbs.
- PCBs were sometimes added to caulk during construction
  - Used for
    - Exterior and interior windows and doors
    - Exterior and interior joints
  - Window glazing
  - Other locations/seams (plumbing, casework, etc.)
- Caulk with PCBs > 50 parts per million (ppm) is not an allowed use

## PCB Sources – Caulk and Other Sealants



► In several northeastern schools:

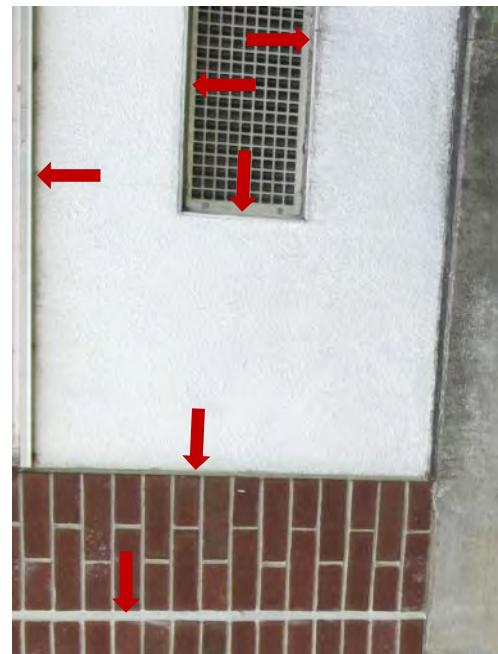
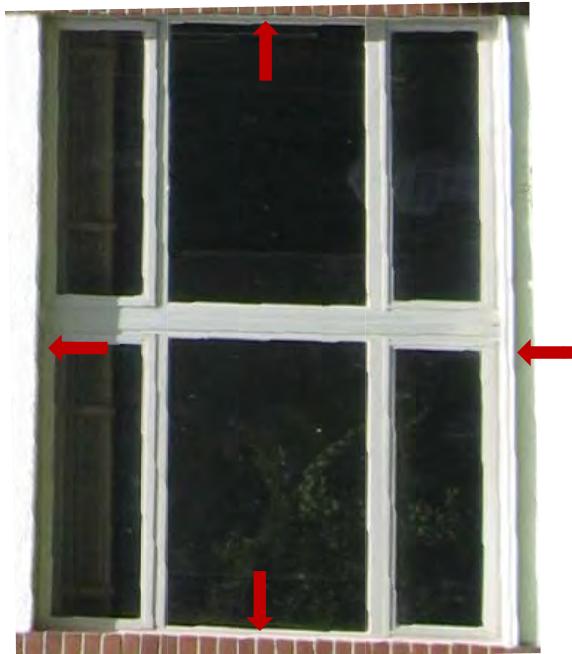
- 18% of 427 interior caulk/sealant samples >50 ppm PCBs
  - 6% of interior samples >100,000 ppm (10% by weight)
- 63% of 73 exterior caulk/sealant samples >50 ppm PCBs
  - 34% of exterior samples >100,000 ppm
- Highest level was 440,000 ppm PCBs (44% by weight)

► We have found that caulk with high PCB levels is usually still flexible and often largely intact

► Visual identification of caulk with PCBs is not reliable

## PCB Sources – Caulk and Other Sealants

- PCBs in caulk/sealants move over time into:
  - Adjoining wood, cement, brick
  - Air and dust inside schools
  - Soil near school buildings
  - Other materials/furnishings
- Emissions of PCBs into the air can be quite substantial
  - Emissions can create indoor air levels above recommended concentrations
  - As the temperature increases, emissions increase
  - Ventilation is an important factor
- Although installed 40 – 60 years ago, high PCB levels remain and emissions will continue far into the future
- Other PCB sources, like coatings and paints, will act much like caulk in releasing PCBs into the environment



1       5.86 As stated by the EPA (*supra*, p. 9), PCB-caulking and other sealants in  
 2 school buildings can create indoor air levels above recommended concentrations. In  
 3 addition, “high PCB levels remain and emissions will continue far into the future.” *Id.*

4       5.87 Monsanto’s PCBs were also produced and promoted as components of  
 5 electrical equipment such as transformers, motor start capacitors, and lighting ballasts.

6       5.88 “Commercial PCB mixtures vary from colorless to dark brown oils, and  
 7 from viscous liquids to sticky resinous semisolids. Although PCBs evaporate slowly at  
 8 room temperature, the volatility of PCBs increases dramatically with even a small rise in  
 9 temperature. Equipment that contains PCBs can overheat and vaporize significant  
 10 quantities of these compounds, creating an inhalation hazard that can be magnified by  
 11 poor ventilation” (ATSDR, 2014, p. 25).

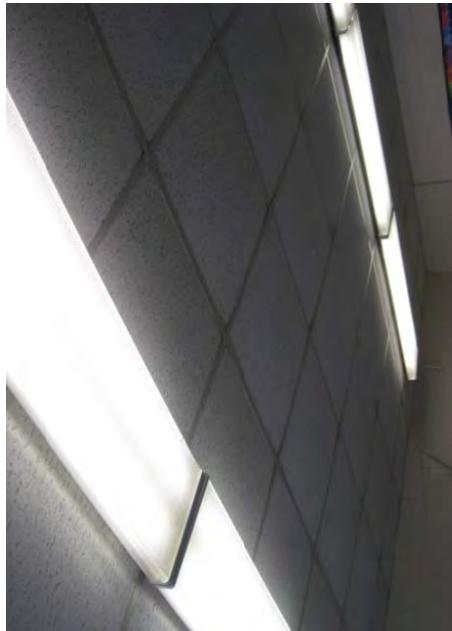
12      5.89 As stated by the State of Washington, “PCBs easily migrate or volatilize  
 13 out of their original source material or enclosure and contaminate environmental media  
 14 such as air, soil, stormwater, and sediment. For example, **PCB compounds volatilize out**  
 15 **of building materials (such as caulk) and into the surrounding environment. PCBs**  
 16 **can also escape from totally enclosed materials (such as light ballasts) and similarly**  
 17 **contaminate and damage the environment.**” State of Washington’s Complaint for  
 18 Damages against Monsanto, p. 9, ¶ 37, Case No. 16-2-29591-6, King County Superior  
 19 Court (Dec. 8, 2016) (emphasis added).

20      5.90 As stated by the State of Washington, “PCBs present serious risks to the  
 21 health of humans... Humans may be exposed to PCBs through ingestion, inhalation, and  
 22 dermal contact. Individuals may inhale PCBs that are emitted into the air. They may also  
 23 ingest PCBs that are emitted into air and settle onto surfaces that come into contact with  
 24 food or drinks. And they may absorb PCBs from physical contact with PCBs or PCB-  
 25 containing materials.” State of Washington’s Complaint for Damages against Monsanto,  
 26 p. 9, ¶ 38-39, Case No. 16-2-29591-6, King County Superior Court (Dec. 8, 2016).

27      5.91 **PCB light ballasts release PCBs.** The preceding information comes from  
 28 the same EPA publication regarding PCBs in school buildings (EPA, 2014, pp. 10-11).

## PCB Sources – Fluorescent Light Ballasts

- Fluorescent and high intensity light ballast capacitors
  - Prior to 1977 - Many (most?) contained PCBs
  - 1977 – 1978 - Some new ballasts contained PCBs
  - After 1978 - No new ballasts manufactured w PCBs
- Some PCB-containing ballasts remain in place
  - In several northeastern schools, 24% - 95% of the light ballasts likely contained PCBs
- Most PCB-containing ballasts have exceeded their expected lifetimes
- Failure and release of PCBs will continue and may increase





United States Environmental Protection Agency

# PCB Sources – Fluorescent Light Ballasts

- PCBs are continuously released into the air from intact, functioning light ballasts
  - When lights are off, emissions are low
  - When lights are on, the ballast heats up, and emissions increase several-fold
- PCB ballasts can fail, releasing PCB vapors into the air and liquid PCBs onto surfaces
  - Air levels of PCBs can become quite large
  - Surfaces can be contaminated
  - Significant impact/costs to remediate
- Residues from previously failed ballasts can remain in light fixtures even if the ballast is replaced
  - The impact on PCBs in the school environment has not been determined

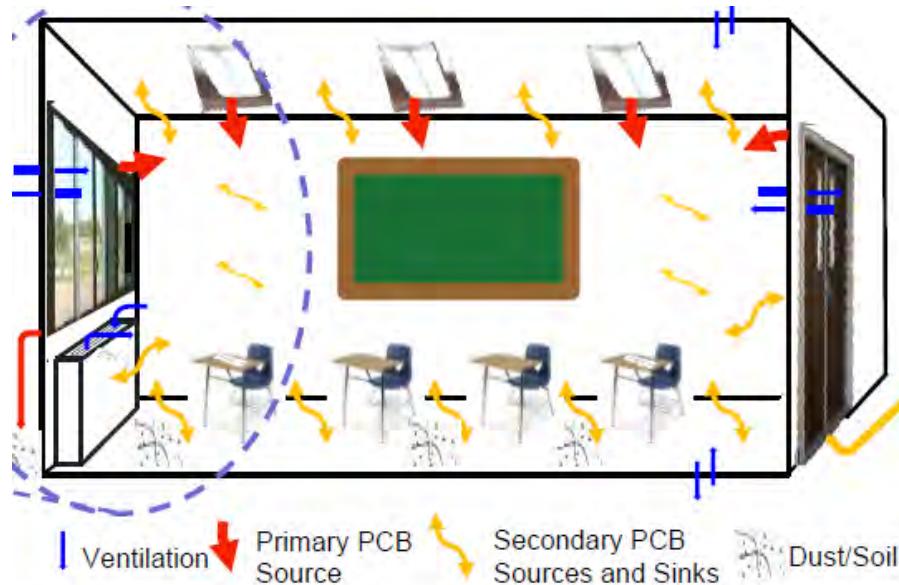


1 As stated (p. 10), PCB-containing light ballasts were manufactured until the late 1970s.  
 2 (“Light ballasts” are components of light fixtures in buildings.) The “failure and release  
 3 of PCBs will continue and may increase” in school buildings containing PCB-light  
 4 ballasts. *Id.* This is because “PCBs are continuously released into the air from intact,  
 5 functioning light ballasts. When lights are off, emissions are low. When lights are on, the  
 6 ballast heats up, and emissions increase several-fold.” *Id.* at 11.

7 **5.92 Failed PCB ballasts cause high levels of PCB contamination.** In  
 8 addition, “PCB ballasts can fail, releasing PCB vapors into the air and liquid PCBs onto  
 9 surfaces.” *Id.* When that occurs, “Air levels of PCBs can become quite large. Surfaces  
 10 can be contaminated.” *Id.*

11 **5.93 Toxic PCDDs and PCDFs.** Also of concern are the extremely toxic  
 12 chemical byproducts of failing PCB-light ballasts, including dioxins and furans. Failing  
 13 PCB-ballasts that pyrolyze their PCB contents generate and emit additional toxic  
 14 chemicals called polychlorinated dibenzodioxins (PCDDs) and polychlorinated  
 15 dibenzofurans (PCDFs). 50 Fed. Reg. 29,171 (July 17, 1985); *Ahrens v. Pacific Gas &*  
 16 *Electric Co.*, 197 Cal.App.3d 1134, 1139, fn 2, 243 Cal.Rptr. 420 (1988).

17 5.94 Over time, school building materials become secondary sources of PCB  
 18 contamination after absorbing PCBs emitting from the primary contamination sources, as  
 19 illustrated in this diagram and in the following EPA slides (2014, pp. 12, 2):



## PCB Sources – Secondary Sources/Sinks

- PCBs released from primary sources are absorbed into other materials in the school environment over time
- Following removal of primary sources, PCBs in secondary sources may be released into the school environment and result in continuing exposures
- In some cases, secondary sources may need to be considered for additional remedial actions following removal/remediation of primary sources

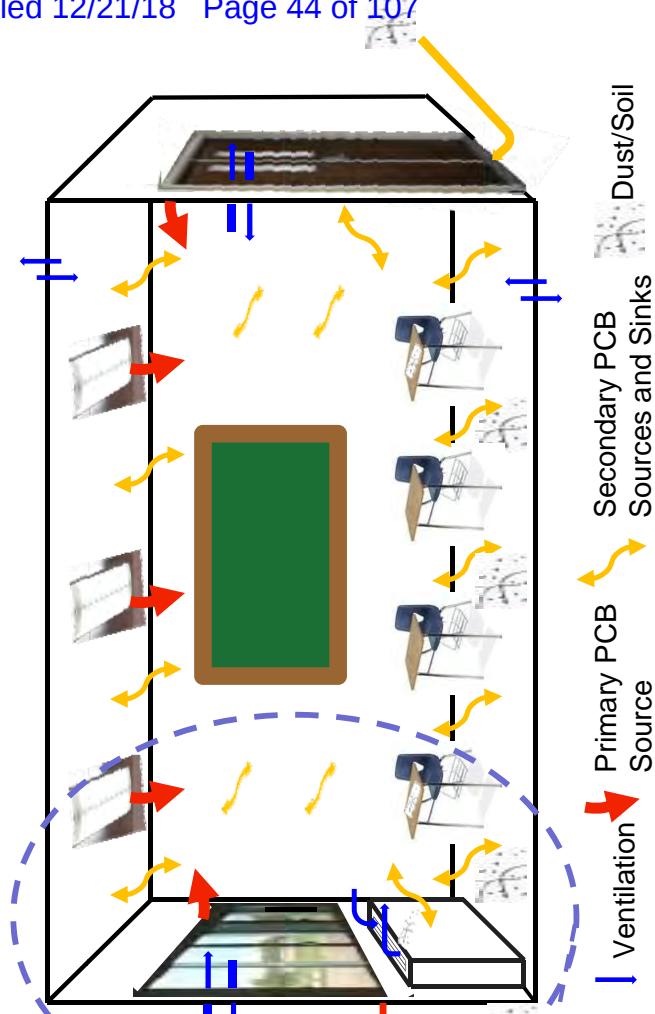
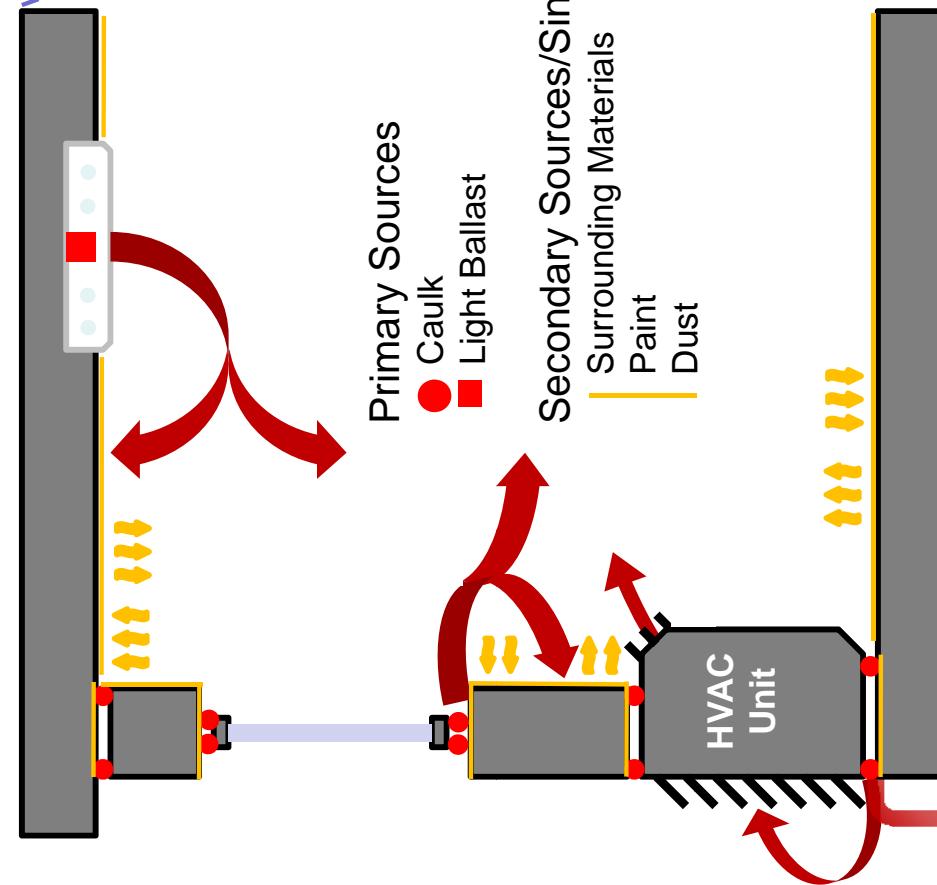




# PCBs - A Complex Problem in Buildings

## Example Scenario

- Over 100 PCB chemicals
- Multiple primary sources possible
- Transport from sources to air, surfaces, dust, soil
- Secondary sources created
- Exposures through multiple pathways
- Ventilation and temperature effects



1       5.95 For these and other reasons, schools should not contain Monsanto's PCBs.

2       5.96 When a reasonably careful manufacturer learns that its product is toxic and  
3 poses public health hazards, the manufacturer stops manufacturing it, recalls its product,  
4 and warns the public about the product.

5       5.97 But Monsanto never recalled PCBs, despite knowing their toxicity and  
6 danger to public health. Instead, Monsanto continued to promote PCBs, particularly in  
7 electrical applications, until PCBs were banned.

8       5.98 Monsanto did not warn users of PCBs, such as the School District, the  
9 Health District, or the Plaintiffs, that Monsanto's PCBs are extremely toxic and pose a  
10 public health hazard.

11       5.99 Monsanto provided the public with no warnings, notices, bulletins, or  
12 information that PCBs are extremely toxic and pose a public health hazard. Any  
13 information provided by Monsanto during or after manufacture has been inadequate.

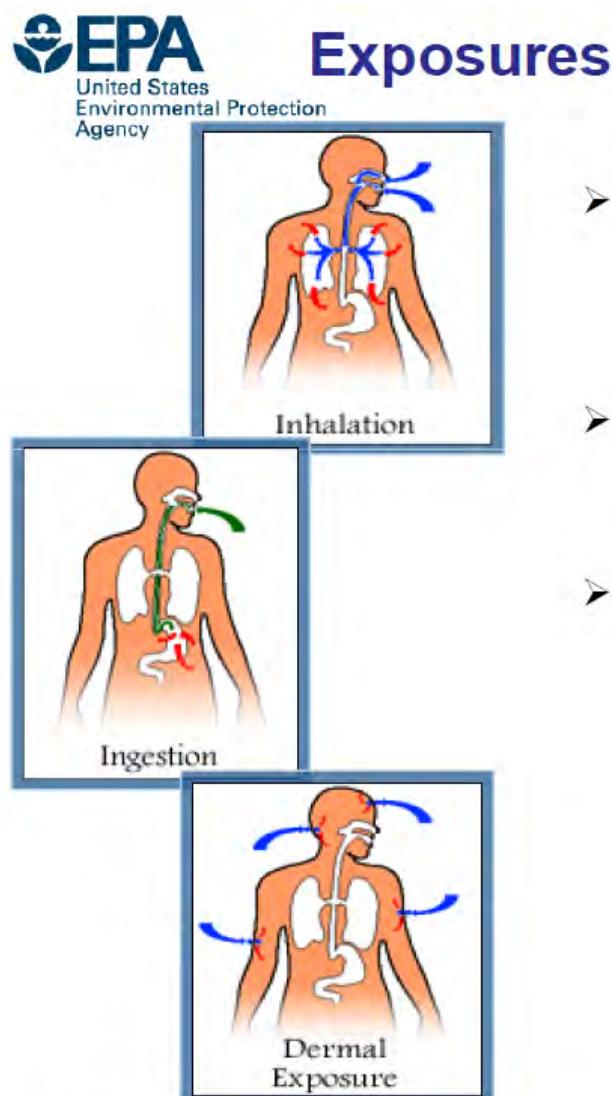
14       5.100 Monsanto's PCBs have contaminated schools in Washington, including the  
15 school in this case, causing harm to occupants of the school, including the Plaintiffs. As  
16 shown above, this was not only reasonably foreseeable, it was actually known to  
17 Monsanto that such harm would come to third parties such as the Plaintiffs. Accordingly,  
18 the Plaintiffs seek damages against Monsanto.

19       5.101 It was also reasonably foreseeable, based on Monsanto's history of  
20 experience with PCB customers and users, that some inspectors, owners, operators,  
21 providers, or maintainers of buildings would engage in negligent conduct that causes  
22 harm to third parties by exposing them to Monsanto's PCBs.

23       5.102 Unfortunately, Monsanto's PCBs continue to contaminate schools built  
24 before 1980, including the school in this case. As shown above, this is because Monsanto  
25 intentionally produced and promoted PCBs in a variety of construction applications. As a  
26 result of Monsanto's conduct, it was reasonably foreseeable that Monsanto's PCBs would  
27 be incorporated in buildings, including the school in this case, and would contaminate  
28 classrooms used by people, including the Plaintiffs, causing them damages. Monsanto's

1 PCB contamination of Sky Valley Education Center was a legal cause of injury to the  
2 Plaintiffs.

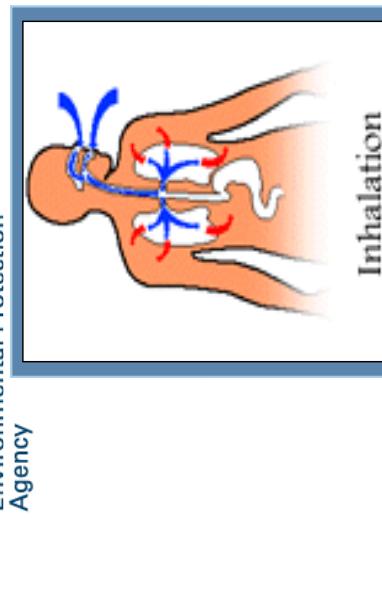
3 5.103 As shown in the following EPA slide (2014, p. 16), “Occupants in schools  
4 with interior PCB sources will be exposed to PCBs in the indoor air, dust, and on surfaces  
5 through their normal activities.” For the Plaintiffs and others in such school buildings,  
6 “Exposures will occur through inhalation, ingestion, and dermal contact.”



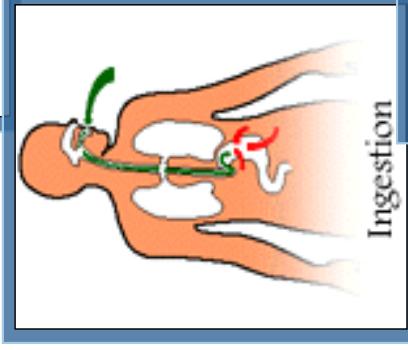
Office of Research and Development  
National Exposure Research Laboratory

28 The full EPA slide appears on the following page:

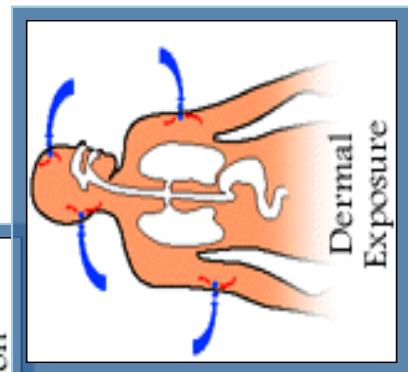
# EPA Exposures to PCBs in the School Environment



Inhalation



Ingestion



Dermal Exposure

- Occupants in schools with interior PCB sources will be exposed to PCBs in the indoor air, dust, and on surfaces through their normal activities
- In school buildings with exterior PCB sources, exposures may occur through contact with contaminated soil
- Exposures will occur through inhalation, ingestion, and dermal contact



Figure from 2009 NIEHS L. Birnbaum presentation

**Office of Research and Development**  
National Exposure Research Laboratory

1       5.104 As shown in the history below, the Sky Valley Education Center was  
 2 contaminated with Monsanto's PCBs. This fact was publicly revealed in 2016 following  
 3 environmental testing done in response to severely sickened and diseased teachers and  
 4 over one hundred Sky Valley individuals reporting to the Snohomish Health District  
 5 illnesses related to the school. The Defendants' wrongdoing led to the PCB  
 6 contamination and caused chronic toxic exposure to the Plaintiffs, causing them damages.

7       5.105 "Monsanto's PCB contamination constitutes injury to the State's public  
 8 natural resources and to other property and waters of the State [of Washington], for  
 9 which the State seeks damages, including on behalf of itself and on behalf of its residents  
 10 in its *parens patriae* capacity." State of Washington's Complaint for Damages against  
 11 Monsanto, p. 5, ¶ 16, Case No. 16-2-29591-6, King County Superior Court (Dec. 8,  
 12 2016).

13       **E. The school buildings became toxic, injuring children and adults.**

14       5.106 **History of the school buildings.** Starting in the 1950s, the school campus  
 15 located in Monroe at 351 Short Columbia Street, near Hill, Kelsey, and Sams Streets, was  
 16 known as Monroe Union High School or Monroe High School.

17       5.107 Today, the tax assessor records identify the property as belonging to Union  
 18 High School District 402:

19  
 20                   UNION HIGH SCHOOL DIST 402  
 21                   HILL & KELSEY ST  
 22                   MONROE, WA 98273  
 23                   SEC 01 TWP 27 RGE 0651/2 SR1/4 SW1/4  
 24                   NE1/4 LESS W 30FT FOR ST PER AF  
 25                   9001110281  
 26                   V 2299 P 941

27       5.108 The following page is a true and correct copy of a page of this government  
 28 record, which is also attached as **Exhibit S**:

**27060100102300****UNION HIGH SCHOOL DIST 402****HILL & KELSEY ST****MONROE, WA 98272**

**SEC. 01, Twp 27, Rge 06S1/2, S61/4, SW1/4  
NE1/4, LESS W 30FT FOR ST PER AF  
9001110291  
V 2299 P 941**

**Neighborhood Number  
5105001  
Neighborhood Name  
City of Monroe Secondary com**

**TAXING DISTRICT INFORMATION**

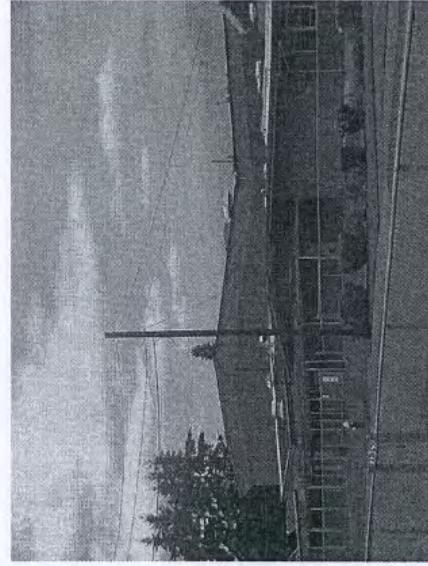
**Jurisdiction Name  
Snohomish  
Area 001  
Corporation 103  
Section & Plat 0  
Routing Number 2706011**

**UNION HIGH SCHOOL DIST 402****HILL & KELSEY ST,MONROE,WA,98272,USA****681****Card No. 1 of 1****Printed 08/09/2016****Tax ID 01270610230003****Transfer of Ownership****HILL & KELSEY ST,MONROE,WA,98272,USA****681****Printed 08/09/2016****Tax ID 01270610230003**

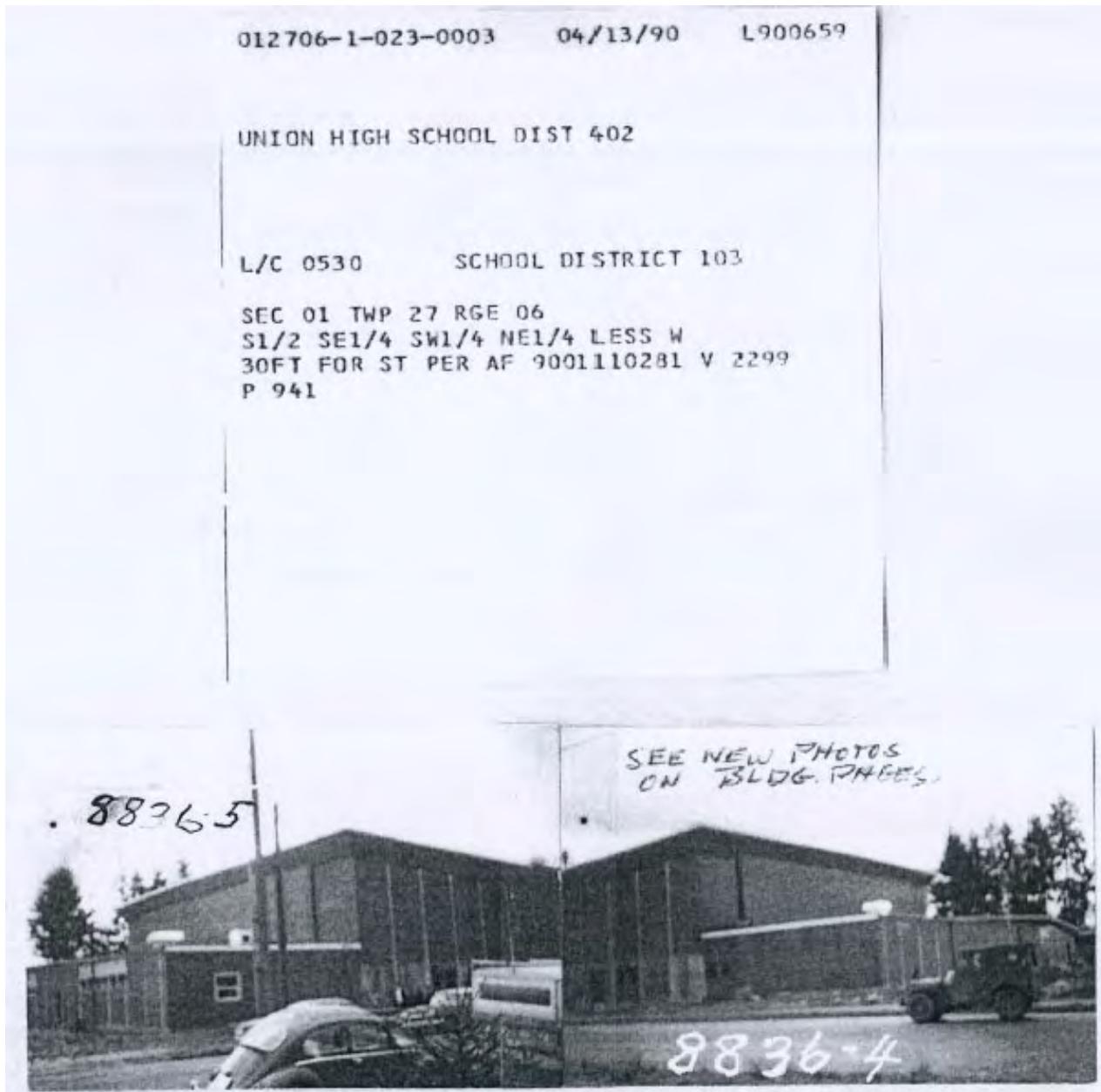
Reason for Change	Assessment Year	Valuation Record					Revval.
		2010	2011	2012	2013	2014	
L	1401500	1214700	1121200	1121200	1121200	1121200	1214700
I	6593900	6593900	6593900	6593900	6593900	6593900	6593900
T	7995100	7808600	7715100	7715100	7715100	7715100	7808600
L	0	0	0	0	0	0	0
I	6593900	6593900	6593900	6593900	6593900	6593900	6593900
T	6593900	6593900	6593900	6593900	6593900	6593900	6593900

**Land Size**

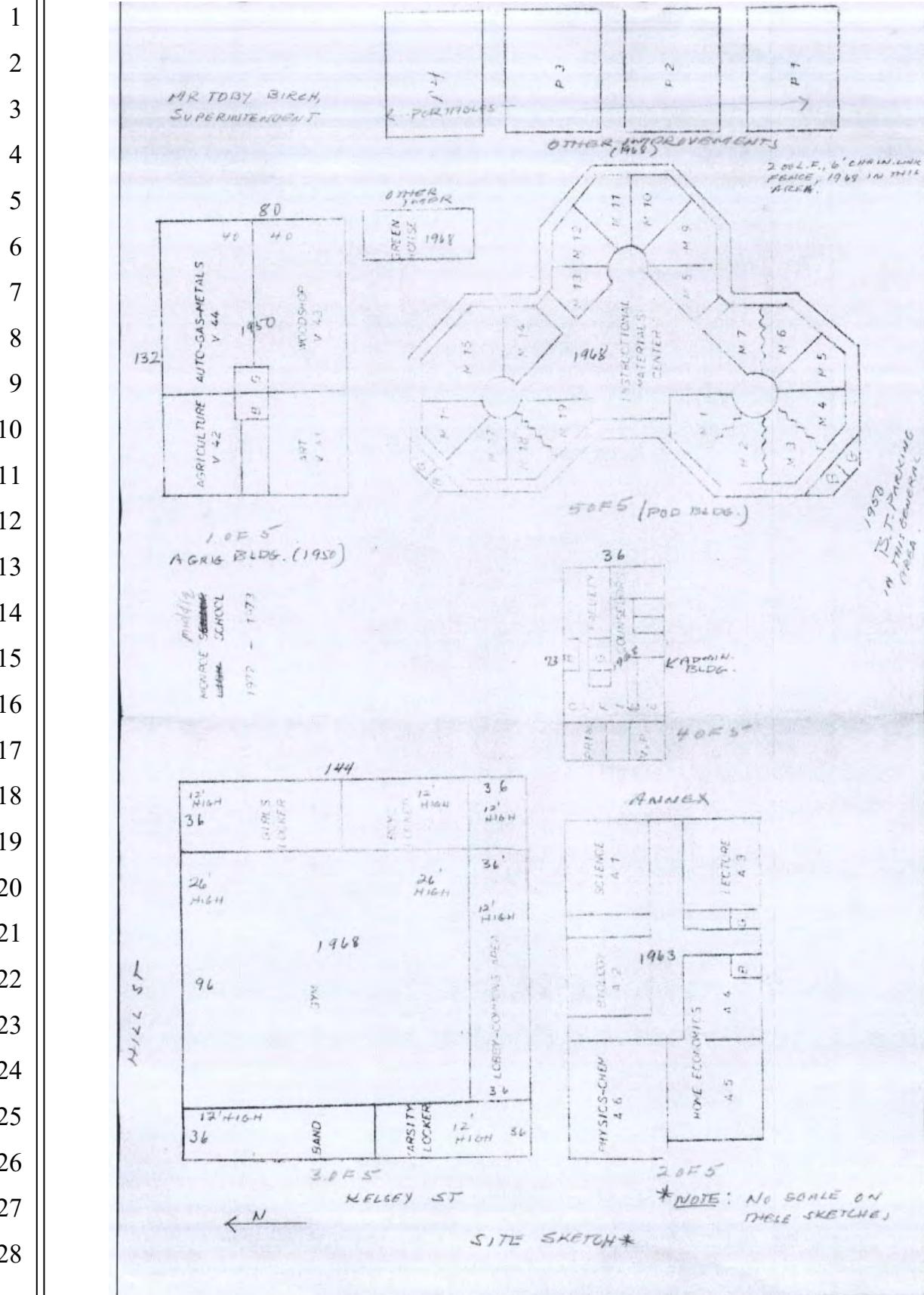
Land Type	Rating, Soil ID - or - Actual Frontage	Acreage - or - Effective Frontage	Square Feet - or - Effective Depth	Influence Factor
				Revval.
74 Commercial V				186812.00



5.109 Other pages in the tax assessor's file for this property reference Union High School District 402 as well as "School District 103," including this excerpt dated April 13, 1990:



A “SITE SKETCH” of the campus shows school buildings built in 1950, 1963, 1965, and 1968. The site sketch is shown on the following page. The configuration of the school buildings at the campus appears the same today:



1       5.110 This school is located in Monroe, Washington, within the inspection  
 2 jurisdiction of the Snohomish Health District.

3       5.111 According to its own statements, “[t]he Snohomish Health District inspects  
 4 all schools (public and private) in order to verify compliance with minimal environmental  
 5 standards for education facilities, as per WAC 246-366-040.” Health District “inspectors  
 6 may check lighting, ventilation, and safety equipment.” The enforcement requirements  
 7 are stated in Health District letters and Washington law. RCW 43.20.050(5).

8       5.112 The facts of the following inspections—and the lack of annual inspections  
 9 in recent decades—is based on Snohomish Health District’s responses to Public Records  
 10 Act requests.

11       5.113 From the late 1950s through 1990, the Snohomish Health District  
 12 conducted inspections of these school buildings on a roughly annual basis. During this  
 13 time, inspectors regularly cited Monroe School District for violating requirements for  
 14 minimum lighting intensities for these school buildings. Despite these citations,  
 15 apparently no penalties or enforcement actions were taken.

16       5.114 For example, a Snohomish Health District school inspection report, dated  
 17 1973, recorded code violations for ventilation, lighting, and safety for these school  
 18 buildings. The inspector wrote, “Lighting is substandard in a number of places in this  
 19 building as has been reported every year since the school was built.” Oct. 15, 1973  
 20 School Inspection report by Snohomish Health District, to Monroe #103, Monroe High  
 21 School (Bates stamped 000054) (emphasis in original).

22       5.115 Lighting continued to be substandard in subsequent decades. This is  
 23 significant because, years later, the same substandard lighting fixtures in these school  
 24 buildings exposed the Plaintiffs to PCBs and other toxic chemicals.

25       5.116 Around 1977, the usage of the school buildings changed from the High  
 26 School program to the Monroe Junior High.

27       5.117 Although Monroe Public Schools corrected some safety standard violations  
 28 over the years, other safety standard violations in the school buildings persisted. For

1 example, a letter dated 1980 from the Health District to Monroe School District reported  
 2 complaints related to ventilation, sanitation and environmental conditions, and noted that,  
 3 “with little exception, these problems have been noted on our inspection reports for the  
 4 past several years. Because of the possible health and safety impact upon your students  
 5 and staff, we feel it is important that substantial changes be made.” June 13, 1980  
 6 Snohomish Health District letter to Monroe School District (Bates stamped 000080-81).

7 5.118 The 1981 Health District inspection report for these school buildings cited  
 8 deficiencies in areas related to ventilation and lighting, stating “lighting is poor in  
 9 classrooms and restrooms in the pods [classrooms].” 1981 Health District inspection  
 10 report to Monroe School District (Bates stamped 000105-08).

11 5.119 The 1982, 1984, and 1985 inspection reports noted similar deficiencies. For  
 12 example, the 1984 report stated, “As we have pointed out for several years now, pod  
 13 classroom lighting is poor.” 1984 Health District inspection report to Monroe School  
 14 District (Bates stamped 000118-24).

15 5.120 Around 1987, the usage of the school buildings changed from being the  
 16 Monroe Junior High to the Monroe Middle School.

17 5.121 In the 1990s, the Health District only conducted safety inspections in 1990  
 18 and 1996. (In 1999, there was a complaint investigation report—not an inspection  
 19 report—regarding poor kitchen ventilation.) There were no Health District inspections of  
 20 the school buildings in 1991, 1992, 1993, 1994, or 1995. In the 1996 inspection report,  
 21 the Health District again cited Monroe School District for ventilation and lighting code  
 22 violations in these school buildings.

23 5.122 The Health District did not conduct a regular inspection of these school  
 24 buildings in 1997, 1998, 1999, 2000, 2001, 2002, 2003, or 2004.

25 5.123 By the year 2000, the School District knew that its school buildings built  
 26 before 1980 may contain PCB-light ballasts. A “LIGHTING AND BALLAST  
 27 DISPOSAL PROCEDURES” policy was established. It required inspection of all light  
 28 ballasts during the summer of 2000. See ¶ 3. PCB-light ballasts must then be marked for

1 identification. *Id.* Then “All ballasts that are assumed to contain PCBs must be  
2 disposed of as hazardous waste.” *Id.* at ¶ 4 (emphasis added).

3 5.124 The School District and the Health District should have ensured the  
4 removal and remediation of PCBs and other toxic chemicals from the school. The public  
5 entity Defendants were negligent in not doing so, which was a proximate cause of  
6 Plaintiffs’ damages.

7 5.125 The Health District should have enforced the minimum environmental  
8 safety standards relating to lighting intensities. If the Health District had done so since  
9 1980, the new light fixtures would have been PCB-free. The Health District’s lack of  
10 action, particularly in light of its actual knowledge of decades of safety code violations,  
11 was negligent and a proximate cause of Plaintiffs’ damages.

12 5.126 The 2003 “Health and Safety Guide” by the State Department of Health and  
13 Superintendent of Public Instruction specifically recognized the existence of PCBs in  
14 school buildings:

## 15 I. LIGHTING

		Required Recommended	WAC or Other Code Reference	Plans Review
I 010  S U	Inspect all fluorescent light ballasts for PCB content, being certain to wear rubber gloves and goggles. Identify PCB ballasts for future replacement. Almost all fluorescent light fixtures made before July 1979 contain small amounts of highly concentrated PCB's in their ballasts. that can leak PCB contaminated oil. See website: <a href="http://www.epa.gov/pdb">www.epa.gov/pdb</a>	X	EPA	
I 011  S U	Clean all PCB leakage, including any oil-like film, and replace all leaking ballasts. Dispose of leaking ballasts and cleaning materials in accord with EPA and DOE regulations. Wearing gloves and goggles is important for personal protection as PCB's are absorbed through the skin. Call 1-800-424-4372 or see website: <a href="http://www.epa.gov/r10earth/pdb.htm">www.epa.gov/r10earth/pdb.htm</a>	X	40 CFR Part 761	
I 012  S U	Under the Federal Toxic Substances Control Act, a leaking ballast containing PCB's must be packaged in a container approved for PCB disposal, marked "contains PCBs" and have an accompanying manifest. It must be shipped by an authorized PCB transporter to a licensed PCB disposal facility. See web: <a href="http://www.epa.gov/r10earth/pdb.htm">www.epa.gov/r10earth/pdb.htm</a>	X	TSCA 40 CFR Part 761	

23 Office of Superintendent of Public Instruction and Department of Health. OSPI-DOH  
24 School Health and Safety Guide, January 2003, p. 26.

25 5.127 The negligence of the public entity Defendants allowed PCBs to remain in  
26 the school buildings, which was a proximate cause of PCBs remaining in the old Monroe  
27 Middle School, later known as Sky Valley Education Center, which contaminated the  
28 school and chronically poisoned children and adults, including the Plaintiffs.

1       5.128 It may be that the public entity Defendants were not fully aware of the  
 2 dangers of PCBs due to a lack of warnings from Monsanto. Monsanto's statements  
 3 regarding PCBs have historically minimized the risk of PCBs to human health. Such  
 4 statements may have deceived, misled, or lulled the public entity Defendants into inaction  
 5 regarding the removal of PCBs from school buildings.

6       5.129 The 2003 State policy also required minimum light intensities in school  
 7 buildings. Here is excerpt from that policy requiring minimum lighting:

8       **I. LIGHTING**

		Required	WAC or Other Code Reference	Plans Review
		Recommended		
10      I 001	S    U	Minimum light intensity of 10 foot candles, from general, task, or natural lighting shall be provided in non-instructional areas including auditoriums, lunchrooms, assembly areas, toilet and store rooms, corridors, and stairs.  <input type="checkbox"/> <input type="checkbox"/>	x	246-366-120(1)    x
12      I 002	S    U	Minimum light intensity of 20 foot candles, from general, task, or natural lighting shall be provided in gymnasiums including main and auxiliary spaces, and shower and locker rooms.  <input type="checkbox"/> <input type="checkbox"/>	x	246-366-120(1)    x
14      I 003	S    U	Minimum light intensity of 30 foot candles, from general, task, or natural lighting shall be provided in kitchen areas including food storage and preparation rooms.  <input type="checkbox"/> <input type="checkbox"/>	x	246-366-120(1)    x
16      I 004	S    U	Minimum light intensity of 30 foot candles, from general, task, or natural lighting shall be provided in instructional areas including study halls, lecture rooms, and libraries. In rooms with computers, or during audio-visual presentations, lighting may be reduced.  <input type="checkbox"/> <input type="checkbox"/>	x	246-366-120(1)    x
18      I 005	S    U	Minimum light intensity of 50 foot candles, from general, task or natural lighting shall be provided in special instructional areas including sewing rooms, laboratories (including chemical storage areas), CTE (voc-ed) trade, industrial shops, drafting rooms, and visual & performing arts rooms.  <input type="checkbox"/> <input type="checkbox"/>	x	246-366-120(1)    x

21       5.130 If the minimum lighting requirements had been enforced by the School  
 22 District or the Health District at any time since 1980, they would have uninstalled the  
 23 PCB-light ballasts at the school and installed code compliant, non-PCB light ballasts.  
 24 This would have prevented or minimized much of the PCB contamination and subsequent  
 25 toxic poisoning of the Plaintiffs. Because the public entity Defendants did not do this,  
 26 however, the Plaintiffs were chronically exposed to toxic contamination. The public  
 27 entity Defendants' negligence was a proximate cause of Plaintiffs' damages.

28       5.131 In the 2000s, the Health District only conducted safety inspections of these

1 school buildings in 2005, 2007, and 2009.

2       5.132 In the 2005 inspection letter and report, the Health District stated, as usual,  
 3 that its “inspectors may check lighting, ventilation, and safety equipment” to “verify  
 4 compliance with minimal environmental standards for educational facilities, as per WAC  
 5 246-366-040.” The Health District cited Monroe School District for ventilation and  
 6 lighting standard violations, but again failed to enforce compliance. 2005 Health District  
 7 letter and inspection report to Monroe School District (Bates stamped 000146-51).

8       5.133 For CO<sub>2</sub> concentration limits, ASHRAE Standard 62-2001 recommends no  
 9 more than 700 ppm above the outdoor concentration as the upper limit for occupied  
 10 classrooms, which is usually around 1,000 ppm. Carbon dioxide is an asphyxiate that,  
 11 when measured, serves as a proxy for the quality of ventilation in occupied classrooms.

12       5.134 The 2005 inspection report was the first Health District report to measure  
 13 and record carbon dioxide air quality violations at the school buildings. The report  
 14 recorded 25 readings in 25 separate classrooms at these school buildings that exceeded  
 15 1,000 ppm of carbon dioxide. Six readings were above 1,500 ppm. Four readings were  
 16 above 2,000 ppm. Two readings were above 3,000 ppm. *Id.* at 149.

17       5.135 As in past years, however, the Health District did not enforce compliance  
 18 with the minimal environmental standards for the school.

19       5.136 In 2005, the State compared sensitive or vulnerable individuals like  
 20 children to “canaries in the coal mine.” The introduction is reprinted on the next page:

21       ///

22       ///

23       ///

24       ///

25       ///

26       ///

27       ///

28       ///

1     **Background**

2     Students and school staff deserve and expect a healthy and comfortable environment in which to  
 3     learn and teach. Similarly, parents expect schools to provide a healthy environment conducive to  
 4     student learning and one that does not promote or exacerbate illnesses in their children. Within  
 5     the school environment, reduced indoor air quality (IAQ) due to a lack of fresh air, chemical and  
 6     biological contaminants, temperature, and humidity has resulted in student and staff health  
 7     concerns. These concerns may be expressed as complaints of: headaches, rashes, tiredness,  
 8     respiratory or eye irritation; and may result from single or multiple factors. Since individuals  
 9     respond to stressors differently, it's likely that individuals that respond initially may be more  
 10    sensitive than others and are in essence like the "canary in the coal mine," providing an early  
 11    indication of poor or reduced IAQ. Therefore, it is important that all concerns be taken seriously  
 12    and investigated thoroughly. An open and proactive response to an expressed IAQ concern can  
 13    prevent a minor situation from becoming a major problem.

14    Considerable evidence exists supporting a relationship between poor IAQ and student learning  
 15    and illness. Children spend between 80 and 85 percent of their time indoors, which includes  
 16    about seven hours per day in school. Poor indoor air quality in schools is associated with  
 17    increased student absenteeism and reduced student academic performance. As an example, a  
 18    recent study involving Washington and Idaho schools found that classroom carbon dioxide (CO<sub>2</sub>)  
 19    concentrations greater than 1000 ppm, due to inadequate fresh make-up air, were associated with  
 20    a 10 to 20 percent increase in student absenteeism. During the 1990s, the incidence of asthma in  
 21    young children rose by nearly 60 percent and was responsible for ten million missed school days  
 22    per year nationwide. In the mid 1990s, one in five schools across the United States, representing  
 23    8.4 million students, was identified as having IAQ problems. Furthermore, maintenance and  
 24    operations budgets have declined as a percentage of school operating budgets from nearly 12  
 25    percent in 1990 to nine percent in 2000, which may contribute to poor indoor air quality in both  
 26    new and aging school buildings.

27    Washington State has 296 school districts with more than 2,200 buildings and over one million  
 28    students. While the total number of IAQ concerns reported in Washington State schools is  
 29    unknown, several school districts have experienced severe IAQ events that have resulted in  
 30    temporary school closures. Discussions with officials from these districts highlight the need for  
 31    a clear and systematic approach that enables school administrators to quickly and effectively  
 32    investigate and resolve IAQ concerns.

33    Wash. State Department of Health, Office of Environmental Health & Safety.  
 34    Responding to Indoor Air Quality Concerns in our Schools. June 2005, p. 5, available at  
 35    <https://www.doh.wa.gov/CommunityandEnvironment/Schools/EnvironmentalHealth> (last  
 36    visited November 15, 2017).

37        5.137 In 2006, the Health District did not conduct an inspection of the school.

38        5.138 In 2007, the Health District inspected the school and noted "there were  
 39        several items noted during this safety inspection that appear **not to have been addressed**

1 since the last inspection conducted in 2005.” 2007 Health District letter and inspection  
 2 report to Monroe Public Schools (Bates stamped 000153-59) (emphasis added). This  
 3 included ventilation violations as well as more than a dozen CO<sub>2</sub> measurements in  
 4 different classrooms that exceeded 1,000 ppm, with five measurements that exceeded  
 5 1,500 ppm. *Id.* at 154, 156-57. The Health District also cited the School District for  
 6 violating minimum light intensity standards in the Music rooms, the Library, and a half-  
 7 dozen classrooms. *Id.* at 153, 155.

8       5.139 In 2007, the Health District did not enforce compliance with the minimal  
 9 environmental standards for the school buildings.

10      5.140 In 2007, the School District received its State Study and Survey by an  
 11 architecture firm, Hutteball & Oremus, regarding the District’s public educational  
 12 facilities. The study reported to the School District that the school buildings, then known  
 13 as the Monroe Middle School, have safety issues. The Monroe Middle School “is  
 14 deteriorating at a rate which exceeds that of normal maintenance efforts and funding.”  
 15 2007 Hutteball & Oremus State Study and Survey for Monroe School District, p. 219.  
 16 “The level of deterioration at this facility is the most severe of any school within the  
 17 District.” *Id.* at Executive Summary. The study recommended demolishing the existing  
 18 classrooms and library. *Id.* at 19. “None of the existing HVAC equipment is in  
 19 compliance with current codes.” *Id.* at 69. The study reported that the lighting was  
 20 deficient, and recommended that the lighting system be upgraded and replaced  
 21 throughout the facility. *Id.* at 70, 18. Hazardous material existed in the school buildings:  
 22 “The campus is reported to contain friable asbestos containing material such as pipe  
 23 insulation and non-friable vinyl asbestos floor tile. The Classroom/Library building  
 24 contains insulated asbestos panels at the window areas.” *Id.* at 11. The study did not  
 25 mention PCBs, but recommended a hazardous material survey by an independent  
 26 consultant in conjunction with planning of future modernization, additions, or  
 27 replacements. *Id.* The study stated that “the Monroe Middle School is in need of  
 28 immediate renovation and upgrades... **Existing life safety issues, energy inefficiencies,**

1 **and code issues will continue to exist until significant action is taken to correct these**  
 2 **deficiencies.”** *Id.* at Summary, 25 (emphasis added).

3 5.141 The School District did not follow these recommendations in 2007, but  
 4 instead continued to use the school buildings in their condition for several more years.

5 5.142 In 2008, the Health District did not conduct an inspection of these school  
 6 buildings.

7 5.143 In 2009, the Health District inspected the school buildings and noted “there  
 8 were several items noted during this safety inspection that appear **not to have been**  
 9 **addressed** since the last inspection conducted in 2007.” 2009 Health District letter and  
 10 inspection report to Monroe School District (Bates stamped 000254-62) (emphasis  
 11 added). The repeated violations included safety standards relating to ventilation, lighting,  
 12 and air quality, including roughly a dozen rooms where CO<sub>2</sub> levels exceeded 1,000 ppm.  
 13 *Id.* at 254-61.

14 5.144 Again, the Health District did not enforce compliance with the minimal  
 15 environmental safety requirements for these school buildings.

16 5.145 In 2010, the Health District did not conduct an inspection of these school  
 17 buildings. The Health District also did not enforce compliance.

18 5.146 In May of 2011, the Health District inspected the school buildings and  
 19 noted “there were several items noted during this safety inspection that appear **not to**  
 20 **have been addressed** since the last inspection conducted in 2009.” 2011 Health District  
 21 letter and inspection report to Monroe School District (Bates stamped 000270) (emphasis  
 22 added). Repeated violations included safety standards relating to ventilation and lighting.  
 23 *Id.* at 266-70. This report did not measure and record CO<sub>2</sub> levels.

24 5.147 But the Health District did not enforce compliance with the minimal  
 25 environmental safety requirements for these school buildings.

26 5.148 If the Health District or the State had enforced compliance with minimum  
 27 lighting safety requirements in 2011, then the School District would have uninstalled the  
 28 toxic PCB-light ballasts at the school buildings and installed code compliant, non-PCB

1 light ballasts. This would have reduced the PCB contamination and subsequent PCB  
 2 poisoning of the Plaintiffs. But the Health District and the State did not enforce  
 3 compliance. That was negligent and a proximate cause of Plaintiffs' damages.

4 5.149 Following the spring of 2011, the School District removed the middle  
 5 school program from the school buildings.

6 5.150 The School District chose to move an education program called Sky  
 7 Valley Education Center into the school buildings.

8 5.151 Sky Valley Education Center was and is an alternative kindergarten  
 9 through twelfth grade education program. The School District's parent partnership  
 10 program required parents to be in school with their children under the age of 12 as a  
 11 condition of being enrolled in the Sky Valley program. As a result, many parents spent  
 12 time with their children in the classrooms. Many mothers were also pregnant or had  
 13 infants with them at school.

14 5.152 In the summer of 2011, the School District did not conduct a hazardous  
 15 material survey of the old Monroe Middle School. The School District also failed to  
 16 conduct any hazardous material abatement or renovation work of the school buildings.

17 5.153 The Monroe School District administered the Sky Valley Education  
 18 program at this location, starting in September of 2011, while the Union High School  
 19 District owned the premises.

20 5.154 In the 2010s, the Health District only conducted safety inspections of these  
 21 school buildings in 2011, 2013, and 2016.

22 5.155 In December of 2011, the Health District inspected Sky Valley Education  
 23 Center, now occupying the site of the old Monroe Middle School buildings. As in past  
 24 years, the Health District cited the Monroe School District for violations of primary and  
 25 secondary school safety requirements, WAC 246-366. Jan. 2011 Health District letter and  
 26 report to the Monroe School District (Bates stamped 000273-79). The Health District  
 27 cited the School District for violations of ventilation and lighting intensity requirements.

28 5.156 In 2011, the Health District did not enforce compliance with minimal

1 environmental safety requirements for these school buildings.

2 5.157 In 2012, the Health District did not conduct an inspection of these school  
3 buildings. The Health District also did not enforce compliance.

4 5.158 In 2013, the Health District inspected Sky Valley Education Center. As in  
5 past years, the Health District cited the School District for violations of primary and  
6 secondary school safety requirements, WAC 246-366, including lighting intensity and  
7 ventilation requirements. 2013 Health District letter and report to the School District  
8 (Bates stamped 000283-87). The carbon dioxide levels in four classrooms was measured  
9 and exceeded 1,000 ppm. *Id.* at 283.

10 5.159 In 2013, the Health District did not enforce compliance with minimal  
11 environmental requirements for these school buildings.

12 5.160 In 2014, the Health District did not conduct an inspection of these school  
13 buildings. The Health District also did not enforce compliance.

14 5.161 From 2011 through 2016, the school buildings continued to have PCB-  
15 caulking and PCB-light ballasts, some of which failed over time and leaked PCBs and  
16 pyrolyzed PCB byproducts such as dioxins and furans within the school.

17 5.162 It is unknown exactly how many PCB-light ballasts failed, fumed, leaked,  
18 or smoked PCBs or PCB byproducts (dioxins and furans) into Sky Valley classrooms  
19 between 2011 and 2016. According to a 2014 Monroe School District memorandum,  
20 however, by that time it appears that more than 100 light ballasts had failed, resulting in  
21 “Fixtures requiring maintenance cleaning.” See MSDG\_014266.

22 5.163 From 2011 through 2016, the School District does not appear to have  
23 conducted any environmental testing regarding the various levels of PCBs, dioxins, or  
24 furans in the school buildings during PCB-light ballast failure events or in their  
25 immediate aftermath.

26 5.164 Students and teachers witnessed different PCB-light ballast failures in  
27 different classrooms. The failing PCB-light ballasts burned, fumed, or smoked vapors  
28 into the classrooms. Some failing PCB-light ballasts also dripped PCB fluids onto the

1 desks and carpets. The Monroe School District's solution for one such PCB leak was to  
 2 put a bucket under the leaking ballast, which collected a puddle of PCB fluid. This open  
 3 collection of PCB fluids was done while children used the classroom. The bucket was left  
 4 in place for several days. The PCB-stained carpet was left in place even longer.

5.165 One Sky Valley teacher recorded some PCB-light ballast failures and  
 6 probable failures during this time period. For example, in April 2014 a "ballast in Nona's  
 7 room caught fire and we could smell the smoke in rooms A, C and D and the hallways."  
 8 Another ballast failed and created "a bad smell" the following week. Some teachers  
 9 began researching the issue, inspecting overhead lights in the rooms, and reporting their  
 10 concerns to the Monroe School District. Here is one photo (taken by a teacher during that  
 11 time) of stained light fixture housing, along with the teacher's notes:

12 ballast plates with dried black/brown residue assumed to be previous ballast oil leaks. I  
 13 remember that there at least two (first ballast on left as enter the room from the hallway  
 14 and one near the back of the room on the window side) and maybe three lighting plates  
 15 with brown residue that I assumed was oil from ballast (See Figure 1). We also looked at  
 the fixture in room A that had leaked in 2010 and found that it also had brown residue.



28 Figure 1: Ballast leak in Room C (Note: photo taken April 2014, tray replaced May 2016)

1       5.166 In response to other light ballast failures, the Monroe School District  
 2 maintenance department staff often put the stained light fixture housing materials (along  
 3 with cleaning rags) in hallways or leaning against classroom walls. Some such housing  
 4 materials were left in common areas for weeks.

5       5.167 In 2014, at least three Sky Valley teachers submitted indoor air quality  
 6 reports for classrooms, reporting symptoms of acute headaches, sinus issues, burning  
 7 eyes, “pressure” in the head,” sneezing, and neck pain. Nov. 14, 2014 SVEC Preliminary  
 8 Indoor Air Quality Assessment, East Pod, by EHSI, p. 2.

9       5.168 The Monroe School District knew that the Sky Valley Education Center  
 10 classrooms and common areas contained PCB-light ballasts. The Monroe School District  
 11 also knew that the PCB-ballasts would fail and make “a very nasty smell filling a  
 12 classroom.” The Sky Valley principal acknowledged this to the Sky Valley staff,  
 13 although the principal assured staff that the building is “safe.” Here is part of the Sky  
 14 Valley principal’s message to staff in April of 2014:

15      Hi SVEC Staff,

16      I wanted to let you know about a challenge we are having with the lighting in our school and make sure you are  
 17 aware how to get your lighting fixed should you have an issue. Please know that we are complying with Risk  
 18 Management policies and procedures regarding these light fixtures; and as you all know, Risk Management  
 takes its job of protecting staff and students very, very seriously!

19      I have met with the Maintenance and Facilities Director, Ralph Yingling, consulted with the Assistant  
 20 Superintendent of Operations, John Mannix (who among other things is in charge of Facilities and Risk  
 Management) and talked with our custodians Dean and Tim to review our procedures to ensure safety.

21      Some of the lighting ballasts in our building (as with several other schools in the district and many schools  
 22 nationwide) are quite old and contain material with PCBs. This material requires special care. At this time,  
 there are some of these old ballasts in many of our classrooms and common areas. As these ballasts go out, we  
are replacing them with new ballasts that do not contain PCBs.

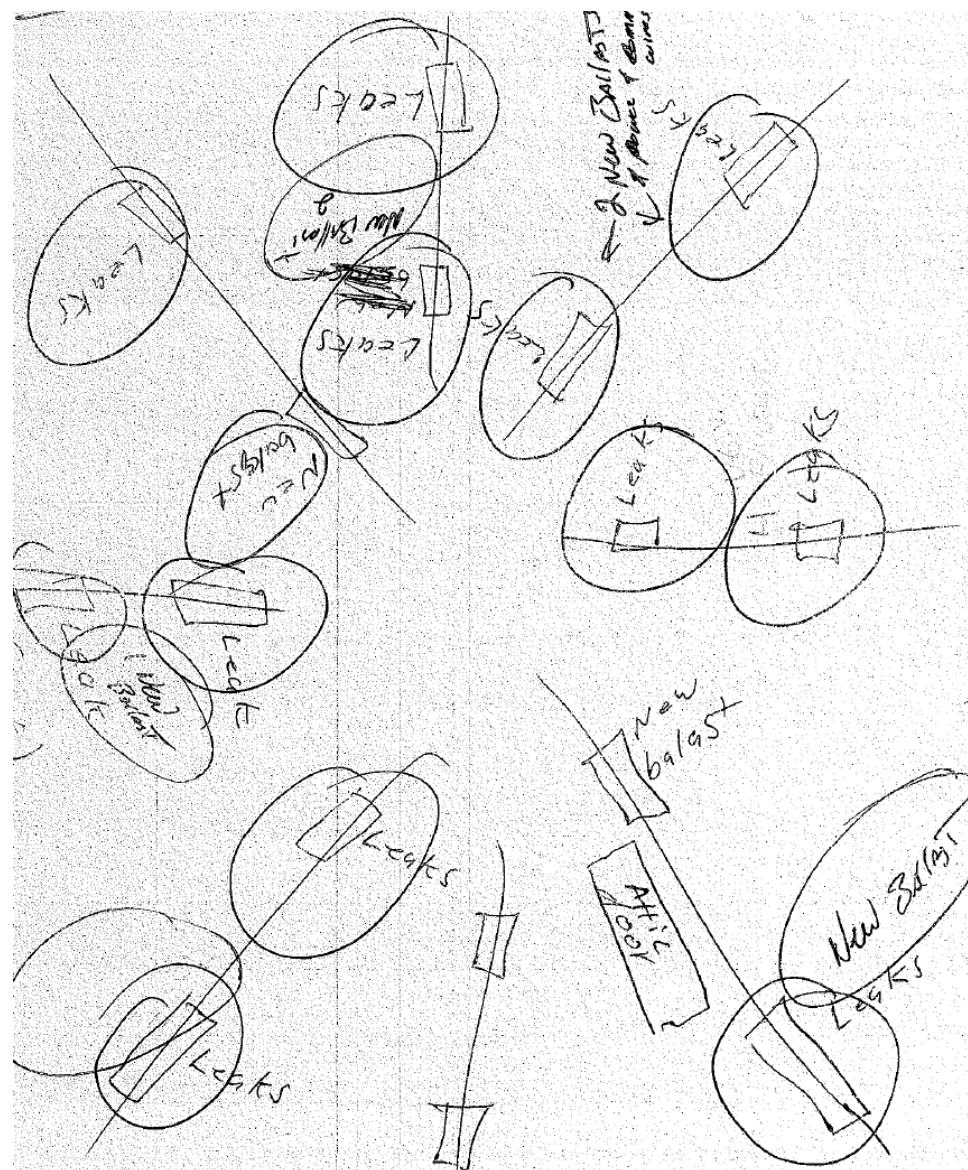
23      In the meantime, we want you to be sure to follow the procedure below to prevent any issues from happening  
 24 in your classroom. The issues we have experienced are a very nasty smell filling a classroom and the large  
 25 bulbs getting extremely hot then producing a gooey substance around the lighting in the fixture. Do not attempt  
 to mess with or fix the light on your own. That job must be done by one of our custodians who knows what  
 equipment to use, how to take care of the problem safely, and how to dispose of the materials properly.

26      ...  
 27      the number one priority of a school district. Our building is quirky and old and sometimes a challenge. But it is  
 ours. And it is safe.

28      Karen

5.169 The Sky Valley principal told parents that they should not complain about the condition of the school buildings or else they could lose their program. Instead, the principal said that parents should be grateful to have the campus.

5.170 In response to complaints in 2014 by some teachers, however, the Monroe School District maintenance department conducted some inspections and drew some maps of the school building ceilings and light fixtures. Some maps are attached to this complaint as **Exhibit T**. Different areas of the school buildings are depicted as showing PCB-light ballast leaks. Here is a portion of one of the maps (a later draft version of MSDG\_014453), looking up at the ceiling of the south pod:



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1       5.171 In October of 2014, the Monroe School District director of facilities and  
 2 operations recorded carbon dioxide levels of 1,700 ppm in one classroom. *EHSI 2014*  
 3 *Report*. In November of 2014, roughly ten measurements of classroom areas showed  
 4 CO<sub>2</sub> above 1,000 ppm. *Id.* at 7. An independent contractor, EHS-International, Inc.,  
 5 concluded that “there is not a mold problem in the classrooms assessed,” and stated that  
 6 “the reported symptoms which include headaches, sinus issues and sneezing are more  
 7 likely related to under-ventilation of the spaces as indicated by indoor carbon dioxide  
 8 concentrations that exceed 1,000 parts per million (ppm) during classroom sessions.” *Id.*  
 9 at 1. Although “carbon dioxide is considered a surrogate for other airborne  
 10 contaminants,” neither the School District nor EHSI appear to have measured the  
 11 concentrations of PCBs or other toxins in the classrooms at this time. *Id.* at 12.

12       5.172 In response to one student’s complaints of headaches, the Health District  
 13 conducted a field investigation and found that classroom “airflow was low (CO<sub>2</sub> high).”  
 14 Jan. 2015 Health District Field Investigation Report (Bates No. 000289).

15       5.173 Apart from that field investigation, the Health District conducted no  
 16 regular, comprehensive inspection of the school buildings in 2015.

17       5.174 Despite the Health District’s lack of inspections in the fall of 2015, the  
 18 Health District had actual knowledge that Sky Valley teachers reported being sickened by  
 19 the school.

20       5.175 In the fall of 2015, one Sky Valley teacher was taken away from the  
 21 school buildings by ambulance due to neurological symptoms. She later resigned due to  
 22 illnesses she attributed to the school buildings. The substitute teacher who took her place  
 23 began having neurological symptoms in the weeks that followed, including a seizure,  
 24 until he also resigned within three to four months of assuming the post. Many other  
 25 teachers developed diseases like thyroid disorders, Hashimoto’s Disease, and cancers.  
 26 Roughly a dozen, if not more, teachers resigned from working in these school buildings.  
 27 Later, roughly a dozen teachers also filed a union grievance against the Monroe School  
 28 District for the toxic contamination in the school buildings. Children and parents in these

1 classrooms also developed concerning symptoms and diseases, as outlined below.

2       5.176 Because the cafeteria “gathering area” was too small to accommodate  
3 everyone for mealtimes, children and adults regularly ate lunches and snacks in their  
4 classrooms.

5       5.177 By the end of 2015, if not earlier, the Health District had actual knowledge  
6 that the school buildings contained PCB spills and PCB-containing materials.

7       5.178 Despite this knowledge, and upon request by the Monroe School District,  
8 in 2015 the Health District canceled the regular inspection of the school buildings. The  
9 Health District canceled the inspection scheduled for September of 2015, and instead  
10 rescheduled it to December of 2015. Upon request by the School District, however, the  
11 Health District also canceled the inspection scheduled for December of 2015. The Health  
12 District delayed the inspection until January of 2016.

13       5.179 As in 2014 and previous years, the Health District did not enforce  
14 compliance with the minimum environmental safety requirements for these buildings in  
15 2015.

16       5.180 During 2015 and 2016, the Health District received and compiled  
17 complaints about illnesses associated with the buildings.

18       5.181 But Health District staff told complaining Sky Valley families and teachers  
19 that the Health District would not take any enforcement action against the School District  
20 unless eventually many people became sick.

21       5.182 Between March of 2013 and January of 2016, the Health District  
22 conducted no regular inspection and issued no regular inspection report to the Monroe  
23 School District regarding these school buildings.

24       5.183 In December of 2015 and January of 2016, the Monroe School District  
25 contracted with environmental engineers to conduct indoor air quality samples, which  
26 were then analyzed in a laboratory for PCB content. Some air samples were taken while  
27 classes were in session. Apparently unbeknownst to the environmental engineers, this air  
28 quality sampling of indoor classroom air was done with exterior windows and doors wide

1 open, rendering the results invalid. During the testing, teachers and students wore their  
 2 winter coats in the classrooms. Other air samples were apparently taken over the holiday  
 3 break when classroom air temperatures were low. One State (Department of Health)  
 4 official emailed other officials, questioning the validity of these results:

5 I do not know the purpose of the PCB testing--is it to address this cluster of exposed students/concerned parents, or to  
 6 address the ballast that smoked in August, or for another reason? I do agree with Nancy that the air test results are not  
 7 representative of school exposures if the school temperature was low on the day of the testing. From the EPA info I've  
 8 read, temperature should be taken into consideration when conducting air tests due to the volatility of PCBs. I also find  
 9 it odd that the LOD for this set of samples of <200 ng/m<sup>3</sup>, is 5x higher than the LOD for the May 2014 report (<40  
 10 ng/m<sup>3</sup>). The author refers to the duration of sampling but that was the same (24 hours). For the above reasons, can't  
 11 agree with the report conclusions about PCBs in air are less than the EPA guidelines.

12 See Snohomish Health District Response to Public Record Requests, Bates No. 000379.

13 5.184 By December of 2015, the Health District and the State Department of  
 14 Health received reports that "multiple teachers have adverse health issues including  
 15 dizziness, nausea and headaches," and that the school buildings contained both live and  
 16 failed PCB light ballasts, according to a timeline created by Health District investigator  
 17 Amanda Zych:

18 11/30/15 – Amanda Zych received call from Nancy Bernard, DOH School Program –  
 19 They received a complaint from a teacher with health issues at the school.

20 12/1/15 – Amanda Zych received call from original complainant – Complainant #1.  
 21 Complainant #1 (teacher) reported that multiple teachers have adverse health issues  
 22 including dizziness, nausea and headaches. Complainant stated that 4 light ballasts  
 23 burst (catch on fire and then oil was noted leaking out of the fixture) in Spring – 2014.  
 24 Complainant #1 reported that consultants were hired by the Monroe School District to  
 25 address. It was reported that another bulb burst and leak this Fall – August 2015 - after  
 26 the consultants completed their work. Complainant #1 also alleged that the PCB light  
 27 fixture that burst in August 2015 had oil that leaked onto the carpet in Room D and the  
 28 School District covered the oil stain with duct tape.

See Snohomish Health District Response to Public Record Requests, Bates No. 000468.

5.185 By this time, if not earlier, the Health District was aware of reports of  
 sickened children ("endocrine or hormonal issues") in addition to the "multiple teachers  
 with adverse health issues," according to inspector Zych's chronology:

1       1/8/16 – Amanda Zych received call from Complainant #2 – 5 children in the school,  
 2 parent. All 5 children are sick with endocrine or hormonal issues. All 5 are in the  
 3 Montessori pod. Forwarded her to the Pediatric Environmental Health Specialty Unit  
 4 (PEHSU).

5 See Snohomish Health District Response to Public Record Requests, Bates No. 000467.

6       5.186 Meanwhile, the Health District received report of multiple teachers who  
 7 were “out on medical leave”:

8       1/20/16 – Amanda Zych received call from Complainant #3 - parent has children at the  
 9 school. Worried because multiple teachers are out on medical leave. Wondering if the  
 10 school is safe. Knows about PCB ballasts. Forwarded her to PEHSU.

11 *Id.*

12       5.187 Despite this knowledge, no public entity Defendant conducted a health  
 13 impact assessment on the Sky Valley population. Instead, the public entity Defendants  
 14 kept the school open and in use.

15       5.188 In January of 2016, the Health District conducted an inspection and issued  
 16 a report to the Monroe School District. As in previous years, the Health District cited the  
 17 School District for numerous violations of WAC 246-366, including roughly twenty  
 18 violations of minimum lighting intensity safety requirements as well as violations of  
 19 ventilation standards.

20       5.189 The Health District report to the School District did not mention PCBs,  
 21 PCB spills, or the sicknesses of Sky Valley teachers, parents, and children.

22       5.190 Meanwhile, the public entity Defendants learned that, in addition to the  
 23 PCB contamination, the school buildings were contaminated with metals (including lead)  
 24 in the school drinking water, radon in the indoor air, disturbed asbestos fibers, and molds,  
 25 including black mold.

26       5.191 By March, Health District inspector Zych noted a report that people had  
 27 been ill from the school buildings for years, back when the campus was the Monroe  
 28 Middle School. Separately, the *Everett Herald* newspaper published the fact that the

School District “received eight complaints about illnesses potentially linked to air quality from 2001 to 2015.” *See Snohomish Health District Response to Public Record Requests* at Bates No. 000465. The March complainant to the Health District reported that “70 people are known to be ill from Sky Valley. More don’t want to be added to the list for fear of repercussions... People are very scared to report symptoms and join group.” *Id.* at Bates No. 000475. This number grew in the coming months.

5.192 A Monroe School District administrator, John Mannix, dismissed these parental and teacher concerns at a community meeting, stating that “If only 10% of the population ever reacted to the environment, that would be normal.” *See Snohomish Health District Response to Public Record Requests*, Bates No. 000474. Mannix also reportedly stated that the reported illnesses could not be caused by the disturbed asbestos fibers in the school buildings, because lung diseases caused by asbestos fiber exposure do not appear until decades after exposure.

5.193 Meanwhile, Health District inspector Zych reported to her colleagues regarding a dozen known cases of Sky Valley children experiencing “precocious puberty,” which is a pathological early-onset of puberty caused by hormonal or endocrine disruptions. *Id.* at Bates No. 000585.

5.194 By April, Health District inspector Zych updated her chronology to reflect additional information, including notes on an environmental report on the buildings:

4/21/16 – Update. Continue to receive calls from numerous complainants. Printing out emails and adding additional service records to the file. Received a copy of the PBS Environmental report on 4/18/16. The report states that PCB levels were above the Rfd in 7 areas of the school. The report states that PCB-containing paint was noted on some interior walls in the school. The report states that some caulk used exterior and interior was noted to contain levels of PCBS.

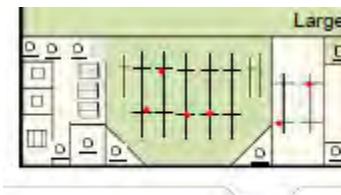
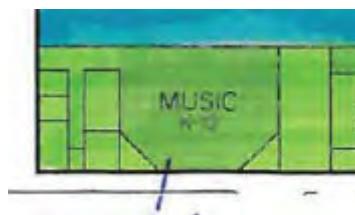
*Id.* at 000592.

5.195 Health District inspector Zych created a spreadsheet of some symptoms and diseases of 63 Sky Valley complainants who had come forward to report adverse medical affects. The Health District spreadsheet is attached as **Exhibit U** (Bates No. 000593-96).

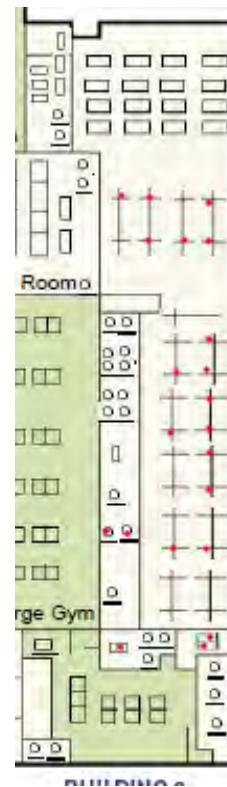
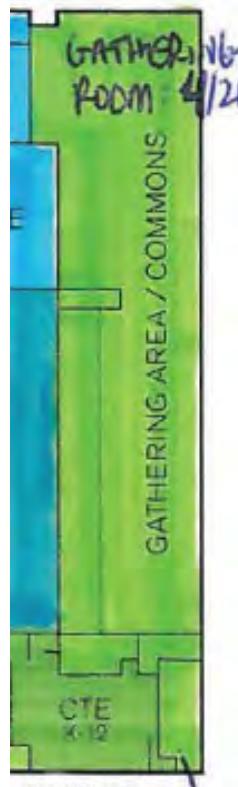
1       5.196 Despite this knowledge, the public entity Defendants kept the school open  
 2 and in use.

3       5.197 The Monroe School District's environmental contractors created a map  
 4 entitled "PCB Light Fixture Cleaning," in which red dots showed the light fixtures  
 5 throughout the school buildings. It is attached as **Exhibit V** along with a map showing  
 6 School District remediation activities in the spring of 2016.

7       5.198 The school building maps show the room names and the rooms' PCB light  
 8 fixtures—the **red dots**—that needed cleaning. Here was the Music Room and its red dots:



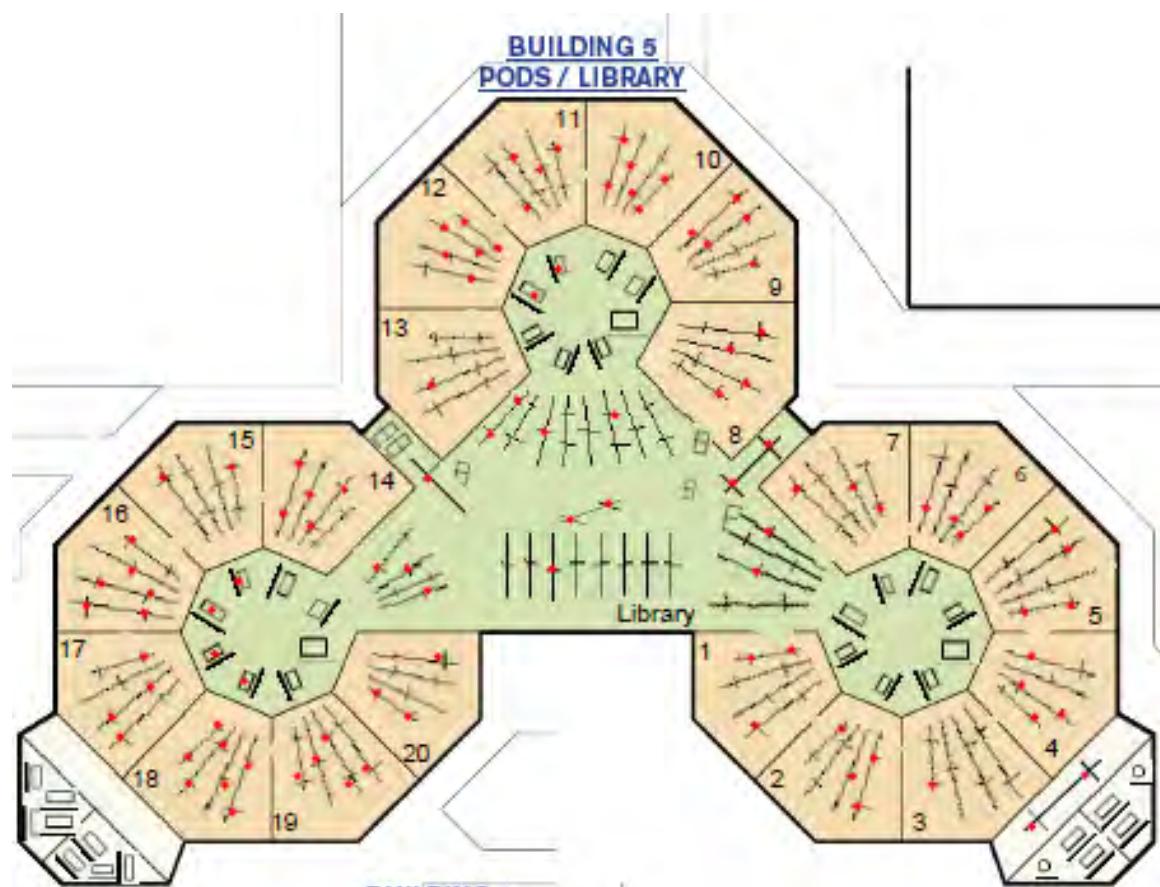
13      5.199 Here was the Gathering Area, where children and adults ate and socialized:



27      5.200 Here was Building 2, Annex, which housed classrooms A, B, C, D, and F,  
 28 marked with the red dots in the classrooms, along with Building 1, the Office:



5.201 Here were the numerous PCB light fixtures that needed cleaning in Building 5, where the Plaintiff teachers taught and prepared lessons. Here is the map of that building, the Library and the pod classrooms 1-20. Note the frequency of red dots:



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1       5.202 By the end of April of 2016, 81 individuals had come forward to report to  
2 Health District inspector Zych regarding their diseases and symptoms they associated  
3 with Sky Valley Education Center:

4                  **From:** Amanda Zych  
5                  **Sent:** Friday, April 29, 2016 4:01 PM  
6                  **To:** Kevin Plemel; Jeff Ketchel  
7                  **Subject:** Updated SVEC Complainant Summary

8                  FYI –  
9 Since December 2015, I have recorded 81 individuals that have complained of health effects that they associate with Sky  
10 Valley Education Center.

11                  Of these individuals:

12                  

- 13                  • 17 – thyroid issues (including 3 Grave's disease, 5 precocious puberty, 5 Hashimoto's disease and 1 hypothyroid)
- 14                  • 29 – report fatigue
- 15                  • 24 – report asthma/cough
- 16                  • 23 report headache
- 17                  • 21 report GI issues and nausea
- 18                  • 17 report cognitive issues – "foggy brain"
- 19                  • 11 report sore throat
- 20                  • 7 Burning of lungs
- 21                  • 9 dizziness, fatigue

22                  Thanks!

23                  Amanda Zych | Environmental Health Specialist | Environmental Health  
24                  3020 Rucker Avenue, Ste 104 | Everett, WA 98201 | **425.339.8774** | [azych@snohd.org](mailto:azych@snohd.org)



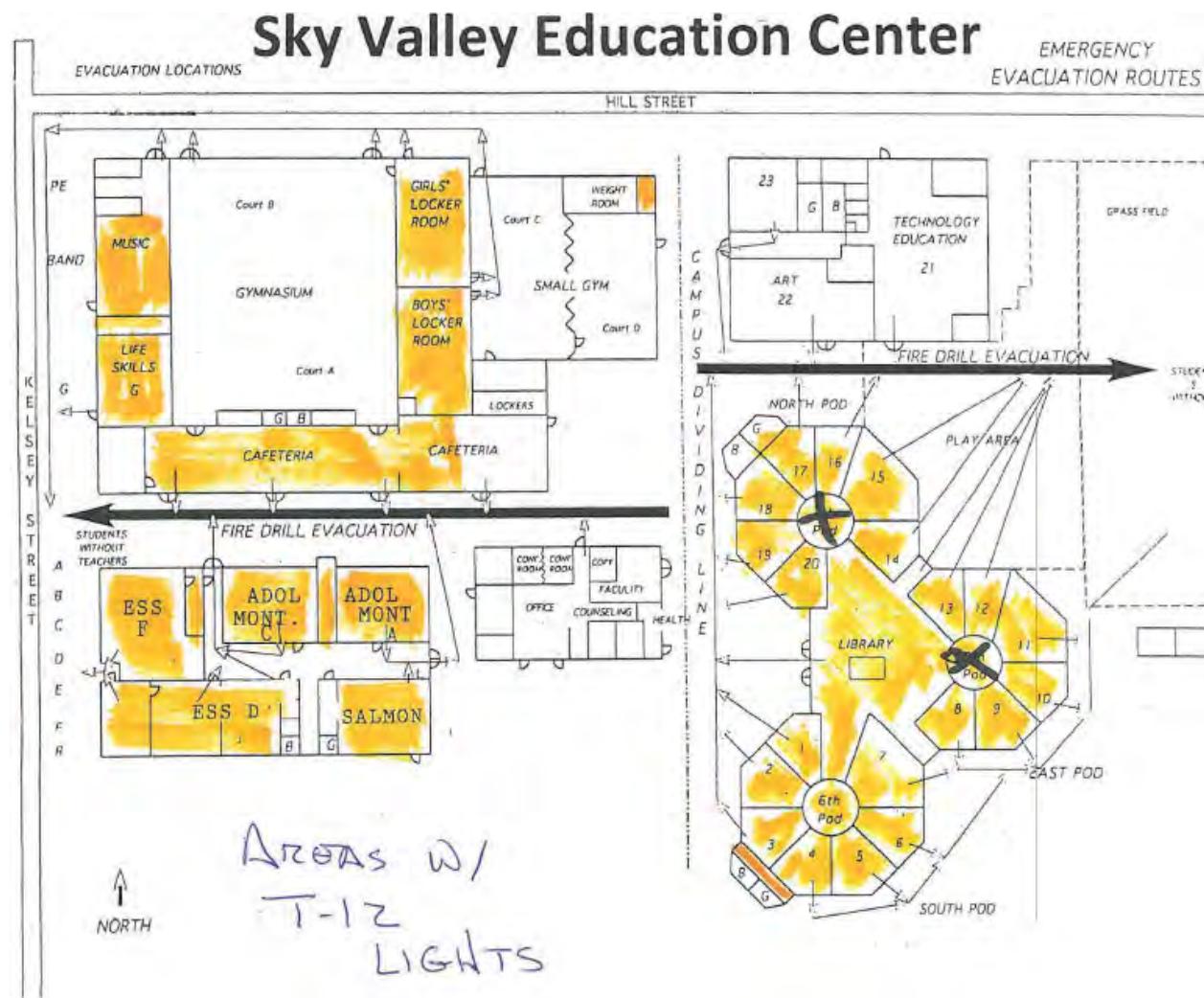
28                  *Public Health: Always working for a safer & healthier Snohomish County*

See Snohomish Health District Response to Public Record Requests, Bates No. 000633.

5.203 The Health District sent at least two letters in June to the School District regarding elevated PCB levels, the closure of some classrooms, and required summertime remediation of the buildings. See **Exhibits W1 and W2**. The Health District letters cited WAC 246-366-140, stating “the existence of unsafe conditions which present a potential hazard to occupants of the school are in violation of these regulations.” *Id.* By the end of June, the Health District was aware of “over 100 parents, teachers and children [who] have reported illness that they associate with the building.” *Id.* at W2.

5.204 Apart from a closed classroom or two, Sky Valley Education Center remained open through June of 2016.

1           5.205 Another name for PCB-light ballasts is “**T-12 lights**.” Here is a map of  
 2 affected classrooms at the Sky Valley school:



21       See Monroe School District’s Response to Public Records Requests, Bates No.  
 22       MSDG\_014499.

23       5.206 Before the 2016 school year was over, the Monroe School District had  
 24 disposed of at least 1,648 pounds of PCB-light ballasts:

25           678 LBS. PCB BALLAST, DRUM # 2769  
 26           628 LBS. PCB BALLAST, DRUM # 2770  
 27           342 LBS. PCB BALLAST, DRUM # 2771

28       See MSDG\_014240-41 (hazardous waste disposal manifest).

5.207 Around this same time, the Monroe School District appeared to have possessed a PowerPoint regarding the dangers of PCB-light ballasts. Here are two of the slides:

## Common Health Effects

- Chloracne and fingernail discoloration.
- Skin and mucous membrane inflammation.
- Swollen eyelids, excessive eye discharge and burning eyes.
- Burning and edema of the face and hands.
- Acute contact dermatitis.
- Chronic absorption cause fatty degeneration of the liver.
- Probable human carcinogen
- Cause cancer in animals

## Chronic Health Effects

- Chronic = long term.
- Evidence of skin cancer.
- Evidence of liver cancer.
- Respiratory Tract Irritation.
- Gastrointestinal Problems.
- Bioaccumulation: builds up along the food chain; builds up in organic tissue.

*See MSDG\_014128, 014135. As shown earlier in this Complaint, the list of these adverse health effects due to PCB exposure is not complete.*

5.208 The Monroe School District's environmental consultants conducted a litany of air, wipe, and caulking sample tests for PCBs between January and June of 2016. Results varied at different locations and different times within the school buildings, with some results as "none detected," other results characterized as being "low" or "safe" by the public entity Defendants, and with other results recognized as being "high." Many

1 wipe samples appear to have been taken *after* deep cleaning. Despite the cleaning efforts,  
 2 PCB test results in May of 2016 were among the more elevated levels of PCBs detected.

3 5.209 By the spring of 2016, some families had unenrolled from Sky Valley due  
 4 to the adverse medical effects that they associated with the school buildings. Other  
 5 families stayed enrolled until June of 2016, having been either unaware of the reports and  
 6 tests of environmental contamination, or having been assured by the Monroe School  
 7 District that the school buildings were safe.

8 5.210 After some remediation in the summer of 2016, the Monroe School  
 9 District resumed Sky Valley classes in September.

10 5.211 Some families attempted to return to Sky Valley in the fall, but unenrolled  
 11 after re-experiencing adverse medical symptoms that they previously experienced in the  
 12 school buildings. With the knowledge that the school buildings had been contaminated  
 13 with toxic chemicals, these families unenrolled. Their spots were then filled by other  
 14 families on the waitlist for the school program (Sky Valley is a popular program), while  
 15 the Monroe School District assured the public that the school buildings were safe.

16 5.212 The Health District and School District had knowledge that this was  
 17 happening, as shown in this fall 2016 email by inspector Zych to school administrators:

18                          From: Amanda Zych  
 19                          Sent: Friday, September 30, 2016 3:10 PM  
 20                          To: 'Piplic, Devlin'; Mannix, John  
                             Cc: Kevin Plemel; Jeff Ketchel  
                             Subject: Complaint - SVEC

21                          John and Devlin,

22                          For your awareness, I talked to a parent today on the phone that has concerns about Sky Valley. She stated that her  
 23 daughter had rashes and her son had nose bleeds last year and were both fine over the summer. She went on to say no  
 24 that they have been back for 2 weeks, symptoms have reoccurred. She stated that her daughter was in Music and Art on  
 Tuesday and then her hands swelled up and had a red rash or hives on them. She stated that her son was in Robotics #1  
 , #18 and Art and then had a bad nose bleed last night.

25                          Amanda Zych | Environmental Health Specialist | Environmental Health  
 26 3020 Rucker Avenue, Ste 104 | Everett, WA 98201 | **425.339.8774** | [azych@snohd.org](mailto:azych@snohd.org)



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1 See Snohomish Health District Response to Public Record Requests, Bates No. 001398;  
 2 see also Bates No. 001820 (Sky Valley parent emailing Zych that “Hope to hear  
 3 something will change for our kids and families. We do love this program. As so many  
 4 that cry that they still feel sick when they come near the building so cannot come [sic].”).

5.213 Decades of PCB off-gassing, leaks, spills, and fume events, however,  
 caused these school buildings to become secondarily contaminated as large toxic “sinks.”  
 That is, porous materials like library books, papers, bricks, and carpets absorbed the  
 PCBs over the years and now release PCBs back into the indoor air. People who have  
 been sensitized to PCB contamination after suffering PCB/PCDD/PCDF poisoning still  
 cannot enter or use these school buildings without suffering uncomfortable, painful, or  
 debilitating reactions, despite the purported abatement or sealing of the primary sources  
 of PCBs (the PCB-caulking and the PCB-light ballasts) by the summer of 2016.

5.214 Environmental tests during the 2016-2017 school year continued to detect  
 levels of PCBs in the air and classrooms of these school buildings to varying degrees,  
 although many results showed “none detected” at the reporting limits. (There is a limit to  
 the sensitivity of the air sampling and laboratory testing.)

5.215 As before, at least some environmental tests were conducted with the  
 classroom windows “wide open,” as reported to Health District inspector Zych:

3/1/2017 – phone call from Shamus Neary teacher – 360 – 348 – 6764 – Room F

He stated that he was concerned that the levels in the quarterly testing were 42,000 in his room. He  
 stated that he was upset that the district didn’t let him know of this sooner. I stated that we just  
 received the information on 2/23/17.

He stated that when he came back from winter break he noticed the air sampling machine in his room  
 and didn’t understand why – he thought the testing was completed. He also stated that the window in  
 his room was wide open. He stated he believes that this occurred on January 7<sup>th</sup>.

See Snohomish Health District Response to Public Record Requests, Bates No. 001517.

5.216 According to the Health District, “Seven of the rooms that were tested  
 during the PCB air sampling indicated levels in excess of established exposure limits.”

1 *Id.* at 001524.

2       5.217 The Monroe School District went to the press to claim that such year-2017  
 3 PCB results were “false positives.” Superintendent Smith made this claim to reporters.  
 4 She also claimed that any past symptoms reported by members of the Sky Valley  
 5 Education community were minor and like “colds.” This was not true. She knew this  
 6 statement was not true because parents and teachers had previously reported to her  
 7 serious illnesses and diseases, including sexual developmental disorders in young  
 8 children after they began attending classes in the school buildings.

9       5.218 The services of the environmental consultant were terminated.

10      5.219 Subsequent PCB testing results appeared to be lower (or “none detected”)  
 11 than the pre-remediation testing results.

12      5.220 Until last year, when the PCB and other toxic contamination became  
 13 public, the School District kept the Sky Valley staff, parents, and children in the dark  
 14 about the actual toxic contamination in the school buildings.

15      5.221 Two out of three STEM teachers at the program have reportedly had  
 16 cancer since 2011. Three young parents of STEM students have died of cancer. Two  
 17 children have reportedly died of cancer. Other children and adults who spent time in the  
 18 school buildings have also suffered cancers, endocrine disorders, autoimmune disorders,  
 19 neurological disorders, and miscarriages.

20      5.222 Since the Monroe School District moved the Sky Valley Education  
 21 program into the old Monroe Middle School in 2011, many but perhaps not all children  
 22 and adults who spent time in the school buildings developed symptoms. The symptoms  
 23 varied in their type and intensity. They included eye irritation, vision difficulties, frequent  
 24 colds and infections, throat irritation, nose bleeds, allergies, asthma, persistent coughs,  
 25 difficulty breathing, heart palpitations, headaches, tremors, numbness, tingling,  
 26 confusion, memory loss, concentration difficulties, depression, anxiety, learning  
 27 problems, dizziness, nausea, vomiting, abdominal pain, gastrointestinal issues, joint pain,  
 28 thyroid issues, puberty abnormalities, weight issues, weakness, fatigue, chills, night

1       sweats, skin rashes or hives or blisters, skin cysts, peeling skin, and other complaints.

2       5.223 The frequency and severity of the symptoms appeared to be positively  
3       correlated with the vulnerability of the individual and the amount of time spent in the  
4       school buildings. The symptoms and diseases worsened over time for these individuals.

5       5.224 Symptom severity generally improved during holiday breaks, when the  
6       children and adults spent time away from the school buildings.

7       5.225 At different times during the past few years, some Sky Valley parents and  
8       teachers raised serious health concerns associated with the school buildings to the  
9       Monroe School District and the Health District. Until early or mid-2016, the public entity  
10      Defendants did not appear to take the concerns seriously.

11      5.226 For example, in 2014 the Monroe School District head of maintenance,  
12      Ralph Yingling, told two teachers that they should not be concerned about the PCB-light  
13      ballasts. He added that he was in Vietnam and exposed to Agent Orange, and PCB-light  
14      ballasts are nothing to worry about in comparison.

15      5.227 Administrators for the School District promised some teachers that all  
16      PCB-light ballasts would be removed and replaced with safe light fixtures during the  
17      summer of 2014. This clearly was not done.

18      5.228 Another School District administrator ridiculed parents of “sick children”  
19      as not being interested in going to school.

20      5.229 The Monroe School District, or its Sky Valley principal, actively  
21      discouraged Sky Valley teachers from sharing environmental safety concerns with Sky  
22      Valley families.

23      5.230 The Monroe School District, or its Sky Valley principal, also actively  
24      discouraged parents from filing indoor air quality complaints with the School District.

25      5.231 The Sky Valley principal also admonished one teacher for cancelling  
26      classes due to her concerns about safety in her classroom.

27      5.232 That same teacher developed Hashimoto’s Disease (a thyroid disorder)  
28      after teaching in that classroom.

1       5.233 Some people who spent time in these school buildings cope with skin  
2 issues. Unlike headaches, gastro-intestinal pain, or other internal maladies, skin disorders  
3 can be photographed. Here are photographs of children, parents, and teachers showing  
4 skin sloughing, blisters, rashes, pigmentation changes, a neurological disorder, and a cyst:





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These photos (above) show blisters and sloughing skin in Sky Valley adults and children.

1 Many flares have spread since the fall of 2014, some flares lasting weeks or months. At least  
2 four were so painful that they interfered with sleep or required medical attention. This photo  
3 shows the start of a flare. In just a week, it got quite a bit worse. First photo was 2/13/15.



14 Second photo shows the rash spreading onto back of neck on 2/21/15.



20 3rd photo was 4/11/2015.





Here are skin pigmentation changes in a Sky Valley adult and a child (above and below):

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1 Here is chloracne on the back of a Sky Valley parent:





Sky Valley children and adults also cope with hives, rashes, and acne. Here are photos of full body hives (above) and acne and rashes (below) in Sky Valley children:





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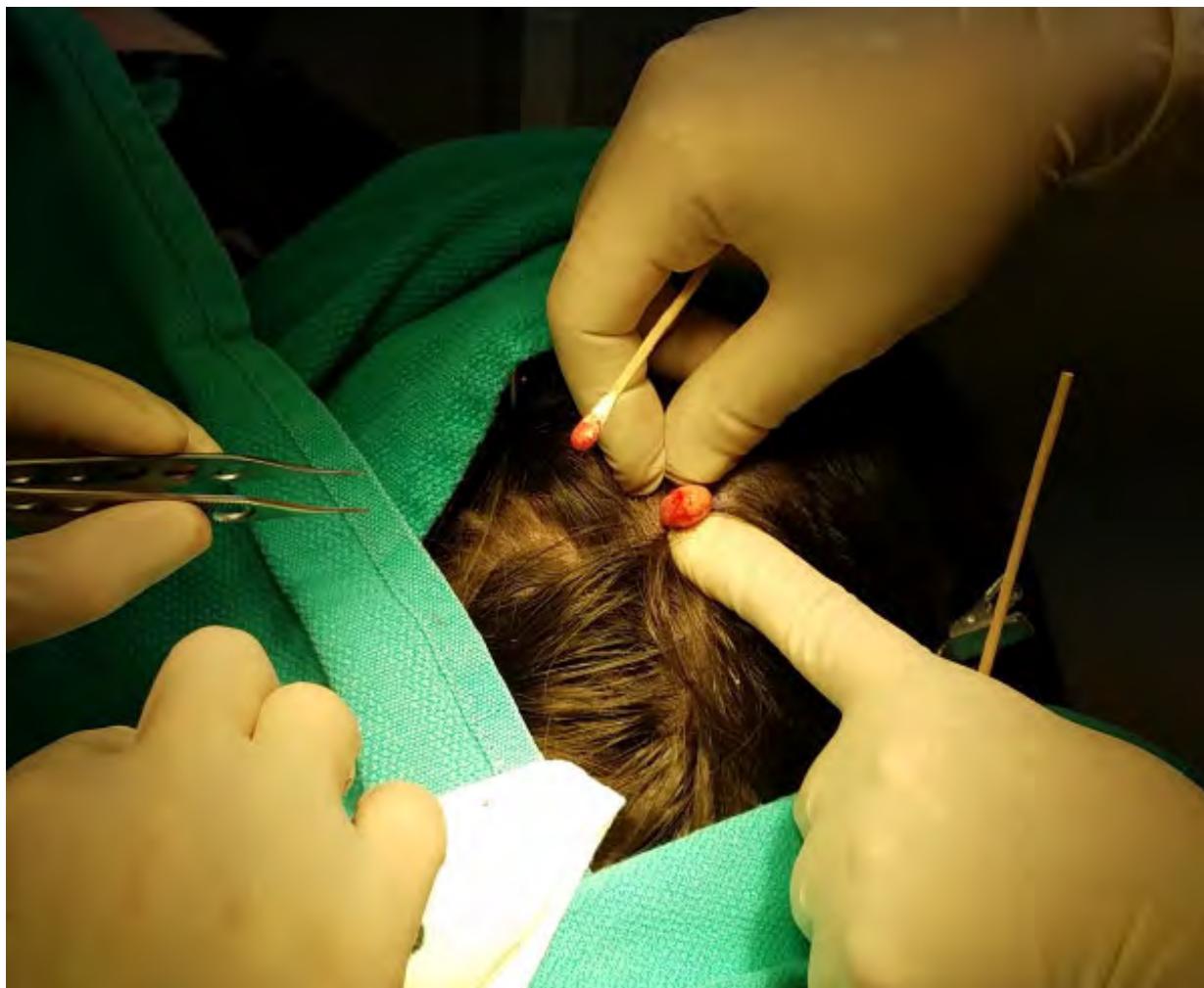
1 Dupuytren's Contracture (2017)



10 Left Hand (Noticed 1/2017)



Right Hand (Noticed 4/2017)



This is the first cyst (of a cluster) removed from a Sky Valley girl's scalp this past year.

1 The photographs above are of about a dozen different Sky Valley individuals who  
 2 developed skin, neurological, and other disorders as part of the constellation of symptoms  
 3 they attribute to time spent in the school buildings before the School District remediated  
 4 the buildings. Other photographs of children and adults in the hospital, whether due to  
 5 encephalitis, cardiac problems, breathing problems, and neurological disorders—all of  
 6 which have happened to Sky Valley children and adults—are not included. Plaintiffs will  
 7 request entry of a protective order regarding Plaintiffs' medical records, identifiable  
 8 photographs, and related personal information.

9       5.234 The Health District's history of citing Monroe Public Schools for code and  
 10 safety deficiencies at these school buildings establishes two basic facts: (1) the school has  
 11 had a history since the 1950s of poor maintenance and safety compliance up to present-  
 12 day; and (2) Snohomish Health District knew that these school buildings suffered from  
 13 poor maintenance and non-compliance with safety requirements, particularly in areas of  
 14 ventilation and lighting.

15       5.235 Despite this knowledge, the School District did not enforce compliance  
 16 with the minimum safety requirements at these school buildings. That was negligent and  
 17 a proximate cause of Plaintiffs' damages.

18       5.236 Despite this knowledge, the Snohomish Health District did not enforce  
 19 "compliance with minimal environmental standards for education facilities, as per WAC  
 20 246-366-040," which was the purpose of the Health District's inspections, until late last  
 21 year. That was negligent and a proximate cause of Plaintiffs' damages.

22       5.237 The State Departments of Ecology and Health both recognized that PCBs  
 23 "can cause adverse health effects in humans and wildlife including cancer and harm to  
 24 immune, nervous, and reproductive systems. PCBs disrupt thyroid hormone levels in  
 25 animals and humans, hindering growth and development." State of Wash. Department of  
 26 Ecology and Department of Health. PCB Chemical Action Plan (Feb. 2015), p. 12,  
 27 available at <https://fortress.wa.gov/ecy/publications/SummaryPages/1507010.html>, (last  
 28 accessed November 14, 2017).

1       5.238 These departments of the State have also been aware that toxic PCBs  
 2 persist in school buildings built before 1979, and are aware that this represents a danger  
 3 to the occupants of the buildings: “We are especially concerned about exposure to  
 4 children in school buildings with old lamp ballasts and other PCB-containing building  
 5 materials.” *Id.* at 12.

6       5.239 The departments of the State know that old ballasts “are at a high risk for  
 7 failing (dripping, smoking, and catching fire).” *Id.* at 15 (parenthetical explanation in  
 8 original). The State recognized that the old ballasts release PCBs into the air breathed by  
 9 children and other people in school buildings:

10      Ballast failures can expose children to concentrated PCB oils and elevated  
 11 PCBs in air. Low concentrations of lower chlorinated PCB congeners are  
 12 continually released from lamp ballasts. When ballasts fail, high  
 13 concentrations of a broader spectrum of congeners are released, so it is  
 important to find and remove the lamp ballasts before they fail.  
*Id.*

14      5.240 A reasonably careful governmental entity establishes and enforces policies  
 15 to remove toxic chemicals such as PCBs from school buildings to prevent toxic exposure  
 16 and to protect children, teachers, and parents from sickness, disease, and death.

17      5.241 A reasonably careful school owner removes toxic chemicals such as PCBs  
 18 to prevent toxic exposure and to protect children, teachers, and parents from sickness,  
 19 disease, and death.

20      5.242 A reasonably careful school inspector requires a building owner to comply  
 21 with the minimum environmental safety requirements to prevent injury and to protect  
 22 people from harm.

23      5.243 A reasonably careful school inspector requires a school owner to remove  
 24 toxic chemicals such as PCBs to prevent toxic exposure and to protect children, teachers,  
 25 and parents from sickness, disease, and death.

26      5.244 The public entity Defendants’ failures to protect the Plaintiffs from  
 27 reasonably foreseeable harms were negligent.

28      5.245 The public entity Defendants’ negligence in these and other ways was

1 reasonably foreseeable to Monsanto and does not serve to cut off the chain of causation  
 2 of Plaintiffs' damages.

3       5.246 Specifically, the School District used Monsanto's PCBs in a reasonably  
 4 foreseeable manner, *i.e.* as components of caulking and light fixtures integral to the  
 5 structures of the school buildings. The use of PCBs by the public entity Defendants was  
 6 not so highly extraordinary as to be unforeseeable. In fact, the use of PCBs by these  
 7 Defendants was consistent with Monsanto's intended promotion of its PCBs, *i.e.*, as  
 8 components of caulking and light fixtures. In addition, the continued use of PCBs in  
 9 school buildings is also reasonably foreseeable, as thousands of school buildings across  
 10 the United States continue to use and contain PCBs.

11       5.247 Due to the negligence of the public entity Defendants, however, the  
 12 Plaintiffs were exposed to PCBs and other toxic contamination. Their negligence was a  
 13 proximate cause of Plaintiffs' damages.

14       5.248 Although the School District and the Plaintiffs "used" Monsanto's PCBs  
 15 as components of the structures and fixtures of the school buildings, the Plaintiffs  
 16 themselves did not "misuse" Monsanto's PCBs.

17       5.249 The public entity Defendants' failures to require and supervise the removal  
 18 of PCBs from the school buildings was caused in part by Monsanto's wrongful conduct.  
 19 This is because Monsanto intentionally misrepresented facts about its PCB products, or  
 20 intentionally concealed information about PCBs, and this wrongful conduct was a  
 21 proximate cause of Plaintiffs' damages.

22       5.250 Specifically, Monsanto provided no warnings, notices, or bulletins to the  
 23 Snohomish Health District, the School District, or the Plaintiffs, which would have  
 24 alerted them to the full extent of the dangers of toxic PCB exposure in school buildings.  
 25 The reason is this: Monsanto profited for decades by producing and promoting PCBs, and  
 26 Monsanto continues to have a strong financial interest in denying the environmental  
 27 dangers and health hazards associated with toxic contamination caused by Monsanto's  
 28 PCBs.

1       5.251 Due to the Defendants' wrongful conduct, the Plaintiffs have suffered past  
 2 damages and will suffer future damages. Damages includes reasonable fears of present  
 3 and future adverse medical consequences. *Wilson v. Key Tronic Corp.*, 40 Wn. App. 802,  
 4 701 P.2d 518 (1985) (where defendant operated a toxic landfill that poisoned local well  
 5 water, plaintiffs' fears of present and future health problems stemming from actual  
 6 ingestion of the toxic chemicals are reasonable and therefore compensable).

## 7       **VI.     LEGAL CONTEXT AND CAUSES OF ACTION**

### 8       **A.     State law protects individual rights.**

9       6.1      Plaintiffs bring claims for damages against the named Defendants under state  
 10 law only for strict products liability, negligence, and exemplary damages, as outlined below,  
 11 and under other applicable state law remedies as discovery may reveal.

12       6.2      The Plaintiffs respectfully request that the guarantees of the Washington  
 13 State Constitution weigh in the consideration of legal rulings in this case. "All political  
 14 power is inherent in the people, and governments derive their just powers from the  
 15 consent of the governed, and are established to protect and maintain individual rights."  
 16 Wash. Const., Art. I, § 1. The Washington Supreme Court recognizes "that the judiciary  
 17 has ample power to protect constitutional provisions that look to protection of personal  
 18 'guarantees,'" including "judicially enforceable affirmative duties of the State." *Seattle*  
 19 *School Dist. No. 1 v. State of Washington*, 90 Wn.2d 476, 502, 585 P.2d 71 (1978). This  
 20 includes the "paramount duty on the State to make ample provision for the education" of  
 21 children. *Id.* Courts have "ample power" to protect such constitutional guarantees and  
 22 personal rights:

23       When it comes to considering individual rights such as are protected by the  
 24 guarantees, that the right to trial by jury shall remain inviolate; that no  
 25 person shall be deprived of life, liberty or property without due process of  
 26 law; that no law shall grant to any citizen or class of citizens privileges or  
 27 immunities which upon the same terms shall not equally belong to all  
 28 citizens; and many other constitutional guarantees that look to protection of  
 personal rights, the courts have ample power, and will go to any length  
 within the limits of judicial procedure, to protect such constitutional  
 guarantees.

1    *Seattle School Dist. No. 1 v. State of Washington*, 90 Wn.2d 476, 501, 585 P.2d 71 (1978)  
 2    (holding in part that the school district, parents, and school children who were faced with  
 3    deteriorating buildings and other shortfalls, had standing to sue the State for its violations  
 4    of its paramount duty to make ample provision for the education of children), quoting  
 5    *Gottstein v. Lister*, 88 Wash. 462, 493, 153 P. 595 (1915).

6    **B. Plaintiffs are fault-free.**

7       6.3 Defendants cannot show that the Plaintiffs, who worked and taught in the  
 8    school, are at-fault for the toxic contamination and chronic poisoning. The Plaintiffs are  
 9    fault-free.

10      **C. Negligence claims are covered claims.**

11       6.4 The claims against the public entities are for negligent provision,  
 12 establishment, maintenance, inspection, and enforcement of safety standards in the school,  
 13 which were legal causes of Plaintiffs' damages. Stated differently, the public entity  
 14 Defendants negligently managed the safety of the school, which caused the Plaintiffs to  
 15 suffer damages. No "pollution exclusion" would apply to deny coverage, even if such an  
 16 exclusion exists in any policy of insurance in this case. *Xia v. ProBuilders Specialty Insur.*  
 17 *Co.*, 188 Wn.2d 171, 393 P.3d 748 (2017).

18      **D. Defendants' joint and several liabilities.**

19       6.5 These claims relate to negligence and product liability for "hazardous  
 20 substances" that contaminated the school buildings and poisoned the Plaintiffs. As a result,  
 21 all Defendants are jointly and severally liable for all of Plaintiffs' damages. RCW  
 22 4.22.070(3); *Coulter v. Asten Group, Inc.*, 135 Wn. App. 613, 146 P.3d 444 (2006),  
 23 reconsideration denied, review denied, 161 Wn.2d 1011, 166 P.3d 1217.

24      **E. Monsanto Defendants' product liabilities to the Plaintiffs.**

25       6.6 **PCBs are a product.** Monsanto's PCBs are a "product" under Washington  
 26 law. RCW 7.72.010(3).

27       6.7 **Strict product liability, not reasonably safe in construction (WPI**  
 28 **110.01).** A manufacturer of a product is liable if its product was not reasonably safe in

1 construction and this was a proximate cause of plaintiff's damages. 6 Wash. Prac., Wash.  
 2 Pattern Jury Instr. Civ. WPI 110.01 (6th ed.). A product is not reasonably safe in  
 3 construction when it is "unsafe to an extent beyond that which would be contemplated by  
 4 the ordinary consumer." *Id.*, citing RCW 7.72.030(3). Monsanto's PCBs are extremely  
 5 toxic, and their toxicity was a proximate cause of Plaintiffs' damages. The existence of  
 6 Monsanto's PCBs in the construction materials, caulking, and light ballasts of the school  
 7 building was unsafe to an extent beyond that which was contemplated by the other  
 8 Defendants, their employees, and the Plaintiffs who "used" the PCB-containing materials  
 9 in the school buildings, which contaminated the buildings and caused PCB-poisoning in  
 10 the Plaintiffs and others. Monsanto is strictly liable for Plaintiffs' damages.

11       **6.8 Strict product liability, not reasonably safe as designed (WPI 110.02).**

12 A manufacturer of a product is liable if its product was not reasonably safe as designed at  
 13 the time it left the manufacturer's control and this was a proximate cause of plaintiff's  
 14 damages. A product may be not reasonably safe as designed under either a balancing test  
 15 or a consumer expectations test. 6 Wash. Prac., Wash. Pattern Jury Instr. Civ. WPI  
 16 110.02 (6th ed.).

17       6.9 At the time Monsanto manufactured PCBs, there was a high likelihood that  
 18 the PCBs would cause injuries similar to that claimed by the Plaintiffs, and the  
 19 seriousness of the injuries is significant. This outweighed any "burden" on Monsanto to  
 20 design a product that would have prevented the injuries (*i.e.*, alternative chemicals or  
 21 mechanisms used in caulking, light ballasts, and other applications, that are not  
 22 "extremely toxic"), and any adverse effect that a practical and feasible alternative design  
 23 would have on the usefulness of the product. *Id.* Monsanto is also liable under the  
 24 consumer expectations test, considering the following factors: the relative cost to the  
 25 School District of replacing the caulking, light ballast fixtures, and other materials later  
 26 discovered to be contaminated with Monsanto's PCBs; the seriousness of harm caused by  
 27 exposure to PCBs is high; the cost to Monsanto of eliminating PCB production would  
 28 have eliminated PCB profits, while the feasibility of eliminating or minimizing the risk

1 was readily available to Monsanto; and other factors as may be revealed in discovery. *Id.*

2       6.10 Monsanto's PCBs were not reasonably safe as designed and this was a  
 3 proximate cause of Plaintiffs' injuries following exposure to Monsanto's PCBs. This was  
 4 reasonably foreseeable by Monsanto. In addition, any claimed "misuse" of toxic PCB-  
 5 containing products by other Defendants, third parties, or even the Plaintiffs, was also  
 6 reasonably foreseeable. Regardless, a product can be "not reasonably safe" even though  
 7 the risk that it would cause the plaintiff's harm or similar harms was not foreseeable by  
 8 the manufacturer at the time the product left the manufacturer's control. *Id.* (bracketed  
 9 material). As designed, PCBs were not reasonably safe, and Monsanto is strictly liable for  
 10 Plaintiffs' damages.

11       6.11 **Liability for negligence, "Comment K" unavoidably unsafe products**  
 12 **(WPI 110.02.01).** A chemical manufacturer has a duty to use reasonable care to design  
 13 chemicals that are reasonably safe. "Reasonable care" means the care that a reasonably  
 14 prudent chemical manufacturer would exercise in the same or similar circumstances. A  
 15 failure to use reasonable care is negligence. 6 Wash. Prac., Wash. Pattern Jury Instr. Civ.  
 16 WPI 110.02.01 (6th ed.).

17       6.12 The question of whether a manufacturer exercised reasonable care is to be  
 18 determined by what the manufacturer knew or reasonably should have known at the time  
 19 of the plaintiff's injury. In determining what a manufacturer reasonably should have  
 20 known in regard to designing its product, a jury should consider the following: a  
 21 chemical manufacturer has a duty to use reasonable care to test, analyze, and inspect the  
 22 product it sells, and is presumed to know what tests would have revealed; and a chemical  
 23 manufacturer has a duty to use reasonable care to keep abreast of scientific knowledge,  
 24 discoveries, advances, and research in the field, and is presumed to know what is  
 25 imparted thereby. *Id.*

26       6.13 From the first decade of manufacture, Monsanto knew that its PCBs were  
 27 toxic. The scientific research regarding the toxicity of PCBs increased over time. Despite  
 28 the actual and imparted knowledge of PCB toxicity, Monsanto continued producing

1 PCBs so Monsanto profited from their sales. Monsanto only stopped producing PCBs due  
 2 to federal action banning their production. PCBs were never reasonably safe. They are  
 3 toxic, durable, persistent, bioaccumulate, and are known to migrate from their source  
 4 material to contaminate the surrounding environment. By their very nature as synthetic  
 5 chemicals, PCBs were and are unavoidably unsafe products. Monsanto was negligent and  
 6 is liable for Plaintiffs' damages.

7       **6.14 Liability for failure to provide warnings when manufactured (WPI**  
 8 **110.03).** A manufacturer has a duty to supply products that are reasonably safe. A  
 9 product may be not reasonably safe because adequate warnings or instructions were not  
 10 provided with the product. This can be proven either through a balancing test or a  
 11 consumer expectations test. 6 Wash. Prac., Wash. Pattern Jury Instr. Civ. WPI 110.03  
 12 (6th ed.).

13       6.15 The balancing test establishes that Monsanto is liable: at the time of  
 14 manufacture, there was a likelihood that PCBs would cause injury or damage similar to  
 15 that claimed by the Plaintiffs, and given the seriousness of the injuries or damages, the  
 16 lack of warnings by Monsanto were inadequate; and Monsanto could have provided  
 17 adequate warnings or instructions. Monsanto could have provided warnings—but chose  
 18 not to provide any warnings—such as “**CAUTION: CONTAINS PCBs**  
 19 **(Polychlorinated Biphenyls), A TOXIC ENVIRONMENTAL CONTAMINANT**  
 20 **REQUIRING SPECIAL HANDLING AND DISPOSAL.**” Monsanto presumably  
 21 chose not to provide such PCB warnings because the warnings would have reduced PCB  
 22 sales and profits.

23       6.16 The consumer expectations test also proves that Monsanto is liable: the  
 24 construction materials and fixtures containing PCBs are not cheap, and their replacement  
 25 by the School District would likely be a factor considered; the seriousness of potential  
 26 disorders and diseases (including reproductive toxicity and cancers) caused by PCB  
 27 exposure is extremely high, especially considering the vulnerability of children; the cost  
 28 and feasibility of eliminating or minimizing the risk are substantial; and other factors as

1 discovery may reveal. *Id.*

2       6.17 Monsanto's PCBs were not reasonably safe because adequate warnings or  
 3 instructions were not provided, and this was a proximate cause of Plaintiffs' injuries. As a  
 4 result, Monsanto is liable for Plaintiffs' damages.

5       **6.18 Liability for failure to provide warnings after manufacture (WPI**  
 6 **110.03.01).** A manufacturer has a duty to supply products that are reasonably safe. A  
 7 product may be not reasonably safe because adequate warnings or instructions were not  
 8 provided after the product was manufactured. 6 Wash. Prac., Wash. Pattern Jury Instr.  
 9 Civ. WPI 110.03.01 (6th ed.). PCBs are not reasonably safe because adequate warnings  
 10 or instructions were not provided after they were manufactured: (1) Monsanto learned, or  
 11 a reasonably prudent manufacturer should have learned, about the dangers connected  
 12 with PCBs (while and) after they were manufactured; (2) without adequate warnings or  
 13 instructions, PCBs are unsafe to an extent beyond that which would be contemplated by  
 14 an ordinary user such as the School District or the Plaintiffs; and (3) Monsanto failed to  
 15 provide warnings or instructions concerning the dangers of PCBs in the manner that a  
 16 reasonably prudent manufacturer would act in the same or similar circumstances.  
 17 Because Monsanto did not provide adequate warnings or instructions after its PCBs were  
 18 manufactured and this was a proximate cause of Plaintiffs' injuries, Monsanto is liable  
 19 for Plaintiffs' damages.

20       **6.19 No “useful safe life” defense, statute does not apply.** A statute of repose  
 21 enacted in 1981 provides a defense to some product manufacturers. It provides that “a  
 22 product seller shall not be subject to liability to a claimant for harm under this chapter if  
 23 the product seller proves by a preponderance of the evidence that the harm was caused  
 24 after the product’s ‘useful safe life’ had expired.” RCW 7.72.060(1). The statute also  
 25 provides that “‘Useful safe life’ begins at the time of delivery of the product and extends  
 26 for the time during which the product would normally be likely to perform or be stored in  
 27 a safe manner.” RCW 7.72.060(1). The statute creates a presumption: “If the harm was  
 28 caused more than twelve years after the time of delivery [of the product], a presumption

1 arises that the harm was caused after the useful safe life had expired. This presumption  
 2 may only be rebutted by a preponderance of the evidence.” RCW 7.72.060(2).

3       6.20 Monsanto’s PCBs were installed in the school from the 1950s through the  
 4 1970s. Although the PCB-caulking and PCB-light ballasts continued to have *useful*  
 5 product lives up to the time of remediation in 2016, the PCBs themselves never had *safe*  
 6 lives due to their extreme toxicity. Monsanto knew that PCBs were toxic, but it provided  
 7 no adequate warnings. As a result, the public entity Defendants were left uninformed by  
 8 the manufacturer about the extent of the true dangers of PCBs. Up to the present day,  
 9 PCBs remained as toxic as they were when Monsanto produced and promoted them. By  
 10 the 1980s, the EPA termed PCBs “extremely toxic.” The statute of repose requires a  
 11 product to have had a useful safe life when manufactured; the plain meaning of “safe,”  
 12 however, does not include “extremely toxic.” Due to their extreme toxicity, Monsanto’s  
 13 PCBs never had a safe life. PCBs are not and were not reasonably safe products. PCBs  
 14 were and still are unavoidably unsafe products. A defense that applies to products having  
 15 a “useful safe life” cannot and does not apply to PCBs.

6.21 **No “useful safe life” defense, the indefinite persistence of PCBs means  
 an indefinite “useful” life.** In the alternative, the chemical stability and persistence of  
 PCBs means they have an indefinitely long “useful” life. In the school, the PCB-light  
 ballasts continued to perform their functions for decades, in fact, until 2016 when they  
 were uninstalled. Likewise, the PCB-containing caulking continued to perform its  
 function of sealing gaps between walls, window frames, and masonry joints, until the  
 caulking was removed in 2016. The utility of the PCBs continued uninterrupted from the  
 time of their installation in the school until 2016, and the PCBs performed their functions  
 throughout that time. RCW 7.72.060(1) (“‘Useful safe life’ begins at the time of delivery  
 of the product and extends for the time during which the product would normally be  
 likely to perform...”). The product seller statute of repose provides Monsanto no defense  
 in this case.

6.22 **No “useful safe life” defense, statutory exception applies.** In the

1 alternative, if the Court finds that PCBs had a safe life, then a statutory exception applies  
 2 to deprive Monsanto of the defense. “A product seller may be subject to liability for harm  
 3 caused by a product beyond its useful safe life if... The product seller intentionally  
 4 misrepresents facts about its product, or intentionally conceals information about it, and  
 5 that conduct was a proximate cause of the claimant’s harm.” RCW 7.72.060(1)(b).  
 6 Monsanto has intentionally misrepresented facts about PCBs, or has intentionally  
 7 concealed information about them, and that conduct was a proximate cause of Plaintiffs’  
 8 harms. No “useful safe life” defense applies under this statutory exception.

9       **6.23 Statute of limitations.** For the Plaintiffs, the product liability claims did  
 10 not accrue until spring of 2016, when environmental hygienists reported that Monsanto’s  
 11 PCBs contaminated the school buildings. RCW 7.72.060(3); *North Coast Air Services,*  
 12 *Ltd. v. Grumman Corp.*, 111 Wn.2d 315, 759 P.2d 405 (1988); 16 Wash. Prac., Tort Law  
 13 and Practice § 10:16 (4<sup>th</sup> ed.) (Oct. 2017 update) (“A three year discovery rule applies,  
 14 with the provision that the statute begins to run when ‘the claimant discovered or in the  
 15 exercise of due diligence should have discovered the harm and its cause.’”). “The  
 16 Washington Supreme Court has held that this statute extends the limitations period  
 17 beyond the time when the harm occurred in circumstances when the claimant would have  
 18 no reason to know about the causal connection to a defective product.” *Id.*, citing *North*  
 19 *Coast Air Services, Ltd.*, 111 Wn.2d 315. Before spring of 2016, the Plaintiffs had no  
 20 reason to know that any harm that occurred was caused by PCBs and that they were  
 21 manufactured by Monsanto.

22       **6.24 Foreseeability.** For decades, Monsanto produced and promoted PCBs for a  
 23 wide variety of applications, including building materials and fixtures such as caulking  
 24 and light ballasts. Monsanto’s PCBs were installed in the school between the 1950s and  
 25 the 1970s. These building applications—and Monsanto’s PCBs—are stable and durable. It  
 26 was foreseeable that Monsanto’s PCBs would be installed in schools, would persist up to  
 27 the present day, and would harm people such as the Plaintiffs. This is due to several  
 28 factors. The first is the stability and durability of PCBs, known to Monsanto. PCBs do not

1 readily breakdown or decompose. This is one of their utilities and a reason that Monsanto  
 2 produced and promoted them.

3       6.25 The second is the known propensity of PCBs to migrate from their sources  
 4 and contaminate the surrounding environment. Monsanto has known for several decades  
 5 that PCBs migrate from their sources into their surrounding environments and harm the  
 6 organisms that live in those environments. Over the years, the PCBs migrated from their  
 7 sources in caulking and light ballasts into the surrounding building materials such as  
 8 bricks, carpets, and library books, all of which are absorptive and act as a toxic “sink.” As  
 9 shown by the EPA, the toxic sink then acts as a secondary source of toxic exposure to  
 10 occupants of the school, in addition to the ongoing primary sources of PCB exposure. In  
 11 recent years, spikes in indoor air toxicity occurred due to PCB-light ballast failures in  
 12 which PCB liquid dripped onto carpets and desks in classrooms, and in which failing  
 13 PCB-light ballasts vented vapors and pyrolyzed byproducts such as dioxins and furans—  
 14 which are highly toxic as well as foreseeable byproducts—into classroom air. The overall  
 15 toxicity of the school gradually increased every year until 2016, when inspectors  
 16 discovered the PCB contamination and the Health District ordered remediation.

17       6.26 The third factor making the persistence of PCBs foreseeable in the school is  
 18 that Monsanto provided no warnings regarding their toxicity. Monsanto’s knowing  
 19 inaction made it more likely that the other Defendants would not act, causing more  
 20 people, including school children, to become poisoned by Monsanto’s PCBs. In short, it  
 21 was foreseeable that Monsanto’s PCBs would be left in place for decades in the school  
 22 while contaminating it and slowly poisoning the people who use it.

23       6.27 It was also foreseeable that other people and entities may be negligent in  
 24 their provision, maintenance, inspection, or supervision of the school, especially due to  
 25 Monsanto’s failures to warn. Any allegation by Monsanto of “misuse” of toxic PCB-  
 26 containing products by other Defendants, third parties, or even the Plaintiffs, was a  
 27 foreseeable “misuse” in part for this reason. Regardless, a product can be “not reasonably  
 28 safe” even though the risk that it would cause the plaintiff’s harm or similar harms was

1 not foreseeable by the manufacturer at the time the product left the manufacturer's  
 2 control. *See* WPI 111.02, -.03 (bracketed material). PCBs were not and still are not  
 3 reasonably safe. Monsanto is strictly liable for Plaintiffs' damages.

4       **6.28 Missouri exemplary damages apply.** "Washington courts will apply the  
 5 punitive damages law of other jurisdictions in product liability cases, if warranted under  
 6 choice of law principles. In such a situation, the jury instructions on punitive damages  
 7 should conform to the laws of the other state." 6 Wash. Prac., Wash. Pattern Jury Instr.  
 8 Civ. WPI 110.00 (6th ed.), citing *Singh v. Edwards Lifesciences Corp.*, 151 Wn. App.  
 9 137, 143-44, 210 P.3d 337 (2009). Under a choice of law analysis, the Missouri law of  
 10 punitive damages applies because Monsanto's reckless decisions and reprehensible  
 11 conduct took place at Monsanto's headquarters in Missouri. In products liability cases  
 12 under Missouri law, exemplary or punitive damages are available "if the defendant had  
 13 actual knowledge of the defect and the danger and showed complete indifference or  
 14 conscious disregard for the safety of others by selling the product anyway." 34 Mo.  
 15 Prac., Personal Injury and Torts Handbook § 5.4 (2017 ed.), ¶ 17(e). Monsanto produced  
 16 and promoted PCBs, an unreasonably dangerous product, with actual knowledge of their  
 17 dangers. *Id.* at ¶ 11. Monsanto knowingly concealed the hazards of its PCBs and  
 18 marketed them as safe for open and closed applications in order to maximize  
 19 Monsanto's profits from PCB sales. *See, e.g., City of San Jose v. Monsanto Co.*, 231 F.  
 20 Supp. 3d 357, 366 (N.D. Cal. 2017) (denying Monsanto's motion to dismiss the claim  
 21 for punitive damages on these facts while holding that the Cities stated a claim for public  
 22 nuisance based on PCB contamination).

#### 23       **F. Public entity negligence.**

24       **6.29 No Title 51 immunity.** Neither public entity Defendant is an employer of  
 25 the Plaintiff teachers and therefore is not entitled to claim immunity under Title 51. RCW  
 26 51.08.070; *Afoa v. Port of Seattle*, 176 Wn.2d 460, 482, 296 P.3d 800 (2013) (Port of  
 27 Seattle liable in tort to injured worker employed by third-party employer). There are no  
 28 express contracts or acts that show any of the Plaintiffs or the State recognized one as the

1 employee and the other as the employer. *Hubbard v. Dept. of Labor and Indus.*, 198  
 2 Wash. 354, 88 P.2d 423 (1939); *Fisher v. City of Seattle*, 62 Wn.2d 800, 384 P.2d 852  
 3 (1963) (relationship of employer and employee cannot exist without consent of employee  
 4 for purposes of workers compensation laws).

5       **6.30 Union High as landowner and school district.** According to Snohomish  
 6 County tax assessor records, Union High School District No. 402 is the owner of the  
 7 land occupied by the old Monroe Middle School, currently known as Sky Valley  
 8 Education Center, and used by the Monroe School District. Union High is also a school  
 9 district and is liable to Plaintiffs, although Union High is not an employer of any  
 10 Plaintiff and cannot allege Title 51 immunity. Union High violated its statutory and  
 11 common law duties to the Plaintiffs. The violations were a legal cause of damages to  
 12 Plaintiffs. Union High failed to maintain safe premises, violated common law and  
 13 statutory duties to maintain a safe workplace, and is jointly and severally liable with the  
 14 other Defendants to the Plaintiffs. *Afoa v. Port of Seattle*, 176 Wn.2d 460, 482, 296 P.3d  
 15 800 (2013); *Afoa v. Port of Seattle*, 198 Wn. App. 206, 393 P.3d 802 (2017). Discovery  
 16 and legal research may reveal more violations.

17       **6.31 Standing of the Snohomish Health District.** The Health District shall be  
 18 liable for damages arising out of its tortious conduct. RCW 4.96.010; RCW 4.08.120  
 19 (“An action may be maintained... for an injury to the rights of the plaintiff arising from  
 20 some act or omission of such county or other public corporation.”); RCW 39.50.010(c).

21       **6.32 Health District’s direct liability for negligence.** The Health District shall  
 22 be liable for its own failures to hire, train, or supervise its employees in the performance  
 23 of the duties of inspection and enforcement of minimal environmental safety  
 24 requirements for the school buildings. *Id.*; Restatement (Second) of Agency, § 213(a).

25       **6.33 Health District’s vicarious liability for negligence.** Any negligence of a  
 26 Health District board member, administrator, or employee within the scope of his or her  
 27 authority is the negligence of the Health District. 6 Wash. Prac., Wash. Pattern Jury Instr.  
 28 Civ. WPI 50.03 (6th ed.) (modified).

1           **6.34 Health District's obligation to enforce safety requirements in the**  
 2 **school.** The Defendant Snohomish Health District has an obligation to protect public  
 3 health in school buildings in Snohomish County. To protect public health, the State  
 4 Board of Health shall establish safety requirements for water quality, air quality, and  
 5 environmental conditions in school buildings, “including but not limited to heating,  
 6 lighting, ventilation, sanitary facilities, and cleanliness.” RCW 43.20.050(2)(d). The  
 7 Snohomish Health District shall enforce these requirements. RCW 43.20.050(5). The  
 8 requirements are designed for the benefit and protection of the children and adults who  
 9 use public school buildings. *Bailey v. Town of Forks*, 108 Wn.2d 262, 268, 737 P.2d 1257  
 10 (1987) (noting one exception to the public duty doctrine is “when the terms of a  
 11 legislative enactment evidence an intent to identify and protect a particular and  
 12 circumscribed class of persons (legislative intent)”).

13           **6.35 Health District's duty to inspect school buildings.** The Health District  
 14 must inspect schools and enforce safety requirements to prevent injury and to protect the  
 15 children and adults, including the Plaintiff teachers, who use the school buildings.

16           **6.36 Health District's duty to take corrective action and enforce safety**  
 17 **requirements.** The Health District must take corrective action and enforce safety  
 18 requirements in school buildings to prevent injury and to protect the children and adults  
 19 who use the school buildings.

20           **6.37 Health District breached its duties to the Plaintiffs, causing them harm.**  
 21 For years, the Health District knew that the school violated environmental safety  
 22 requirements. For those same years, the Health District had a duty to inspect, verify  
 23 compliance, and order compliance with environmental safety requirements at the school.  
 24 But the Health District failed to enforce compliance until the spring of 2016, by which  
 25 time many people, including the Plaintiffs, had suffered toxic poisoning. In addition, the  
 26 Health District knowingly and negligently delayed enforcement and waited while dozens  
 27 of people reported illnesses and diseases attributed to the toxic school. The Health  
 28 District chose not to act until 2016, when it finally ordered environmental testing and

1 remediation of the hazardous substances in the school. The Health District's violations of  
 2 its duties were legal causes of harm to the Plaintiffs.

3       6.38 The Health District is liable to the Plaintiffs and other reasonably  
 4 foreseeable occupants of the school buildings for the toxic exposures that caused them  
 5 harm. *Campbell v. City of Bellevue*, 85 Wn.2d 1, 530 P.2d 234 (1975) (duty imposed on  
 6 electrical inspector who knew of nonconforming electrical system but failed to enforce  
 7 electrical code compliance, causing injury and death); *Halvorson v. Dahl*, 89 Wn.2d 673,  
 8 574 P.2d 1190 (1978) (claim may be made against city for its long-term knowledge of,  
 9 and inadequate response to, hotel's noncompliance with safety codes); *Bailey v. Town of*  
 10 *Forks*, 108 Wn.2d 262, 737 P.2d 1257 (1987) (liability against police officer who  
 11 allowed drunk driver to drive his truck, hitting motorcyclist). When the Health District  
 12 finally acted in 2016 on the school buildings, it found “[t]he existence of unsafe  
 13 conditions which present a potential hazard to occupants of the school [which] are in  
 14 violation of these regulations.” WAC 246-366-140(1); RCW 43.20.050 (health district  
 15 shall enforce minimum safety requirements in school buildings); *Swank v. Valley*  
 16 *Christian School*, 188 Wn.2d 663, 398 P.3d 1108 (2017) (holding that a statute enacted to  
 17 protect student safety created an implied remedy for violations of the statute). The same  
 18 “unsafe conditions” had been present for months, years, and decades beforehand, had  
 19 harmed the children and adults in the school, and had been known to the Health District.  
 20 The Health District’s failure to enforce the safety requirements at the school buildings  
 21 was a proximate cause of Plaintiffs’ damages.

## 22       G. Roes.

23       6.39 Roes 1 through 10 are public entities or public or private corporations who  
 24 may be liable for causing injuries to the Plaintiffs. Currently, it is not known if named  
 25 Defendants will allege fault against these entities or corporations. Plaintiffs request leave to  
 26 amend this Complaint if Defendants allege fault against third parties, or if facts become  
 27 known showing liability against third parties. Third parties Snohomish County, Northwest  
 28 Education Service District #189, City of Monroe, EHS-International, and McKinstry Corp.

1 are being given notice of this lawsuit. If they or another third party are added as Defendants,  
 2 the new claims in the amended pleadings relate back to the original complaint. CR 15(c).

3 **H. Admonition of the *Environmental Defense Fund* decision.**

4 6.40 The federal district court for the District of Columbia advised that action must  
 5 be taken to prevent toxic environmental poisoning and to protect future generations:

6 We feel constrained to add one final note to emphasize our concern in this  
 7 case. Human beings have finally come to recognize that they must eliminate  
 8 or control life threatening chemicals, such as PCBs, if the miracle of life is to  
 9 continue and if earth is to remain a living planet. This is precisely what  
 10 Congress sought to do when it enacted section 6(e) of the Toxic Substances  
 11 Control Act. Yet, we find that forty-six months \*1287 after the effective date  
 12 of an act designed to either totally ban or closely control the use of PCBs,  
 13 99% of the PCBs that were in use when the Act was passed are still in use in  
 14 the United States. With information such as this in hand, timid souls have  
 15 good reason to question the prospects for our continued survival, and cynics  
 16 have just cause to sneer at the effectiveness of governmental regulation.

14 *Environmental Defense Fund v. Environmental Protection Agency*, 636 F.2d 1267, 1286-  
 15 87 (D.C. Cir. 1980) (internal citation omitted).

16 **I. Accountability.**

17 6.41 Plaintiffs request that each of the Defendants be held accountable for causing  
 18 the toxic poisonings in this case.

19 **VII. PRAYERS FOR RELIEF**

20 **A. Request for preservation of evidence.**

21 7.1 Plaintiffs request that all Defendants and third parties given notice of this  
 22 lawsuit preserve all evidence that may potentially be relevant.

23 **B. Ex parte contact is prohibited.**

24 7.2 Plaintiffs request that defense attorneys instruct their agents, employees,  
 25 defendant employees, and defendants' agents to please refrain from any ex parte contact  
 26 with Plaintiffs regarding the subject matter of this lawsuit, whether in school buildings,  
 27 hospitals, or other locations. This request includes the non-physician State or University  
 28 of Washington Medical Center employee(s) who have observed or attempted to observe

1 clinical evaluations of injured Sky Valley teachers.

2 **C. Limited waiver of physician-patient privilege.**

3 7.3 Under RCW 5.60.060(4)(b), Plaintiffs hereby waive the physician-patient  
4 privilege only insofar as necessary to place damages at issue at the time of trial.  
5 Plaintiffs' actions do not constitute a waiver of any of their constitutional or statutory  
6 rights. Defendants, defense attorneys, and their agents are not to contact any treating  
7 physicians without first notifying plaintiff counsel, so the matter may be negotiated or  
8 brought to the attention of the Court. *Loudon v. Mhyre*, 110 Wn.2d 675 (1988); *Smith v.*  
9 *Orthopedics International, Ltd., P.S.*, 170 Wn.2d 659 (2010).

10 **D. Motion practice.**

11 7.4 Plaintiffs will request relief during litigation through stipulation or motion  
12 practice for a limited protective order to provide appropriate psychological, privacy, and  
13 personal identification information protections for Plaintiffs.

14 7.5 Plaintiffs may request leave to amend the complaint, as discovery or  
15 Defendants' answers may require.

16 7.6 Plaintiffs may request leave to reform the caption to reflect the addition or  
17 deletion of parties.

18 7.7 Plaintiffs may request other relief as may be appropriate during litigation.

19 **E. Judgment for damages.**

20 7.8 Plaintiffs demand judgment against Defendants, and each of them,  
21 individually, jointly, and severally, for monetary damages to make Plaintiffs whole,  
22 together with interest, expenses, costs of suit, attorney fees, as appropriate, and all such  
23 other relief as the Court deems just and proper, including:

24 a. Full compensatory damages to the Plaintiffs for past, present, and  
25 future general damages as allowed by law;  
26 b. Full compensatory damages to the Plaintiffs for past, present, and  
27 future special damages as allowed by law;  
28 c. Exemplary or punitive damages against Monsanto, Solutia, and/or

Pharmacia, under the applicable law of foreign jurisdiction(s); and

d. All other damages allowed by law, rule, or equity.

DATED this 28th day of November, 2018.

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